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## Cardiology

### Preoperative Cardiovascular Appraisal of Patients\*

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The evaluation of the cardiovascular status of a patient is a traditional prerequisite of any contemplated surgical procedure involving general or any other form of anaesthesia. One must decide first of all whether the heart and circulation are normal on a physical or other form of examination; and one should make enquiries as to whether the patient has or has not any cardiovascular symptoms or complaints even though the examination may reveal nothing of an abnormal character. There are patients who may be unaware that anything is wrong with their hearts or circulation but who on careful enquiry, may be found to suffer from certain symptoms that have (too often) been misinterpreted as of gastric, intestinal, neuralgic, myalgic or arthritic origin.

These are the patients that one must carefully appraise and more carefully evaluate before surgery or anaesthesia is contemplated. Individuals with any or all of the symptoms must be looked upon as cases of probable coronary insufficiency until proved otherwise. They are usually those whose ages range between 40 and 70 years or over, sometimes but more rarely they are under 40 years of age.

Not infrequently one is called upon to examine the heart and circulation of patients complaining of acute abdominal distress, who are unaware of anything wrong with their hearts, and who are being prepared by the surgeon for operation for an acute abdominal condition. These cases must be carefully screened for evidences of coronary sclerotic changes or insufficiencies. Others may present evidences of acute right-heart failure with engorged livers. Still others have symptoms that are the result of sudden acute attacks of arrhythmia such as acute fibrillation. Others again may present evidences of active carditis or acute specific or non-specific pericarditis.

Many of these cardiovascular states will be accompanied by, or be ushered in with, symptoms which at times are very often confused with those of acute surgical conditions of the abdomen and often present a difficult problem in diagnosis. Careful enquiry into the history of these and the proper appreciation of the complaints which ante-

dated the acute onset will in many cases clarify the situation. In many one should resort to the electrocardiograph before deciding whether the condition is of cardiac or intra-abdominal character, as the physical examination except perhaps for the accompanying tachycardia may be entirely normal.

The findings of an abnormal heart or vascular system does not preclude anaesthesia or operation provided, of course, that the patient has not had any idiosyncrasy to a previous anaesthetic. That is if a patient has undergone a previous operation under either local or spinal anaesthesia and has shown evidences of sensitivity to the agents used then of course, this type of anaesthetic should not be administered again. Similarly, if the patient has reacted badly to ether, chloroform or nitrous oxide or pentothal on a previous occasion, then one must resort to some other form of narcosis.

It is well to remember, also, in dealing with individuals in the older age groups who present apparently normal cardiovascular systems, that many of these have some arterial or arteriolar changes and one should caution the anaesthetist that improper oxygenation during the period of operation may result in the development of abnormal rhythms such as fibrillation, flutter, tachycardia or even varying degrees of heart-block. A drop in the systemic blood pressure during the operation may ensue as the result not only of anoxia but also from loss of blood and from reflex effects during the surgical manipulations which may tend to promote intra-arterial clotting either in the vessels of the heart, the brain, the kidney or other branch of the general arterial tree.

At the same time one should caution against the use of ephedrin or pituitrin at the time of the operation in these patients, particularly if anoxemia is present, as these substances may only further impair the already impoverished coronary blood flow. In the pre-operative medications given to patients not only with normal cardiovascular systems but others I should like to emphasize that, today, it would appear that too often surgeons are inclined to over-dose their patients with opiates, hyoscine or other sedative drugs before operations in order to allay apprehension and fear, and to promote ease in anaesthetic induction. This pre-operative medication often acts to the detriment of the patient. If one is confronted with an unexpected collapse of the circulation during the operation, as these drugs tend to reduce the

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sensitivity of the vasomotor centre in the medulla thus precluding resuscitation measures. If spinal anaesthesia is decided upon it is not infrequently found that the surgeon has ordered morphine beforehand and the combined effects may in many cases produce a decided drop in systemic pressure which will be irreversible.

Now let us consider those patients with organic heart disease who have to undergo anaesthesia and operation. Are these all to be considered poor surgical risks? They are not poor surgical risks and for practical purposes the compensated heart which permits a reasonably normal if somewhat restricted way of life is as virtually capable of handling a major operation and a general anaesthetic as a normal heart and the surgical mortality rate is not substantially higher. In the presence of heart failure or other serious manifestations of active heart disease, however, the evaluation of the surgical indication as against the surgical risk often presents a difficult problem. The surgical indication is usually a more important factor than the presence or absence of heart disease in deciding upon an operative procedure: but insofar as cardiac disease adds to the surgical risk, both the status of cardiac function and the etiological type of heart disease are determining factors.

In general there is statistical evidence to indicate that rheumatic heart disease is associated with a lower surgical mortality rate than arteriosclerotic coronary heart disease or syphilitic cardiovascular disease. Rheumatic heart disease, as you know, will usually be manifest either in the form of mitral or aortic valvular disease in the form of stenosis or insufficiency of these valves with or without an associated enlargement of the heart. If the heart presents evidences of an appreciable increase of size then one must determine the status of myocardial efficiency and note whether there are associated signs or symptoms of either left—or right-heart congestive failure. Enlarged hearts denote myocardial damage or change, due either to hypertrophy or to dilatation, the result of strain and/or disease. At times many of these cases of rheumatic carditis may present various associated arrhythmias such as in the cases presenting mitral stenosis with insufficiency, less often are those of aortic valve states unless these latter are in the older age groups when one may possibly have varying degrees of coronary sclerotic disease as well. These cases may then have varying disturbances of conduction either of the A-V or of the intraventricular types which may cause alterations in the character of the heart sounds, i.e., varying gallop character sounds so commonly associated with these forms of heart block.

If one should find evidence of active disease in those presenting signs of old rheumatic heart disease it would be well to postpone any elective forms of operation until the manifestations of

active infection have subsided. On the other hand if the operation is of a more urgent kind then one must be prepared to proceed with surgery utilizing the local or spinal forms of anaesthesia in preference to the inhalation types as they are better tolerated. If congestive failure is present then one should fortify the heart with appropriate digitalis therapy beforehand, during and following the operation; and should emphasize to the anesthetist that full oxygenation of the blood should be maintained. Another condition frequently superimposed upon the more chronic forms of rheumatic disease (as well as congenital heart abnormalities) is that which is recognized as acute or acute bacterial endocarditis. These cases today, thanks to the therapeutic value of the antibiotics, may be operated upon during the course of active disease without the serious risks which they offered previously. It is well, however, in such cases to postpone elective operations until bacteremia is overcome. But if the case is so demanding immediate surgery it may be undertaken provided the operation is not too prolonged, great blood loss is avoided, and provided that anoxemia is guarded against.

Diseased hearts due to syphilis may present fairly typical clinical pictures either of normal or of enlarged organs and both may be found to have signs of involvement of the aortic valve either in the early stages of the infection, simply as a very soft diastolic blowing murmur best heard along the left sternal margin, or simply a loud tambour like sound as well as a variable intense blowing systolic murmur without accompanying thrill. These signs if found in younger individuals (under 40 years of age) may be looked upon as manifestations of early cardiovascular lues. In these cases of syphilis one may also determine whether the first part of the ascending aorta is involved or not because this finding only further aids in corroborating the etiology. The dilated aorta may possibly be percussed as an enlargement of the transverse diameter of the great vessels at the base of the heart, but in most cases will be unappreciated clinically and only apparent on the x-ray film or fluoroscopic screen.

Symptomatic evidence of syphilitic involvement of the heart is most commonly characterized by pain of an anginal character, and also by dyspnoea either upon exertion or at rest. To date due to the early antibiotic treatment of syphilitic infections we are not seeing the numbers of cardiovascular cases that we saw 25 years ago but it still behooves us to be on the lookout for early signs of cardiovascular involvement. We may not be absolutely sure as yet whether our present penicillin therapy will eradicate this form of cardiovascular disease. Ordinarily it has required

some 15 to 25 years after the initial infection for these evidences to become apparent.

Cases of hypertension present themselves for operation but in these there are not any great problems of any great moment. One must, however, attempt to elucidate the factors concerned in the cause of the elevation of the blood pressure remembering the possibility of renal disease, urinary obstruction, hyperthyroidism, cerebral causes or diabetes. To rule in or not any of these factors, of course, is important before subjecting a patient to anaesthesia or operation. It is also of value to appreciate the reaction of the heart to the hypertensive state, to take cognizance of whether it has shown any features indicating any signs of failure, remembering, too, that the early manifestations of such are dyspnoea, persistent or periodic in form, nocturnal in character and cough with or without orthopnoea all of which are evidences of failure of the left ventricle. One must also inquire from the history whether symptoms indicating impaired coronary blood flow have ever been, or are at present, complained of.

Full appreciation of these findings in regard to the heart of hypertensives is important before subjecting them to operation and anaesthesia, while the presence of an impaired myocardium as in other conditions will influence one whether to operate or delay, and which form of anaesthesia is best to employ. Uncomplicated essential hypertension tolerates anaesthesia and operation well as witnessed in the low mortality in prolonged operations of sympathectomies on this type of case.

Frequently the finding of a hypotensive state may be recorded and this in the minds of many may be construed as a contraindication for anaesthesia or operation. In such cases, as with those hypertensives referred to, one should attempt to determine, if it is possible, the cause underlying this low-blood pressure state. Conditions of the body most commonly associated with low systemic blood pressures are anemia, shock, hypothyroidism, Addison's and Simmon's diseases, certain central nervous system states and, most recently, post-sympathectomies. A failing or congestive cardiac may also exhibit a low blood pressure but there will be other more apparent signs. Hypotension per se is not a contraindication to operation. Factors, however, entering into its production may require either attention or correction before surgery in many cases should be advised. Anoxemia, blood loss and surgical shock, however, must be avoided.

An irregular heart action deserves some attention before anaesthesia or operation is considered. The common irregularity of an extrasystolic type for the most part offers no difficulty to either anaesthesia or operation but one should remember that in an arrhythmia of this character accom-

panying heart rates of 90 beats or more per minute may indicate coronary sclerosis and insufficiency. This form of irregularity may at times also be a forerunner, particularly under anaesthesia or anoxemia of paroxysms of tachycardia. This eventually may be offset and at times overcome by the preoperative administration of quinidine. Paxoxysmal tachycardia should also be stopped by quinidine or digitalis or other appropriate therapy before undertaking an operation or administering an anaesthetic.

Considering another very common arrhythmia, i.e., auricular fibrillation or flutter one must first of all decide whether these arrhythmias have been present for some time previously or whether they are of more recent origin. If of recent origin, then a possible anterior infarction may be responsible and an attempt may be made with Quinidine to restore the rhythm to normal; but failing this, one then should digitalize until the apex rate falls between 70 to 90 beats per minute. If a permanent form of fibrillation is found to be present one must decide then whether the circulation is well controlled or compensated and also whether there is a pulse deficit. If evidences of congestion are found and/or a pulse deficit exists then proper therapy with digitalis must be instituted before advising anaesthesia or operation.

The finding of an irregular heart action due to dropped beats or a partial heart block deserves some attention also. If this should be a manifestation of an active carditis then operation must be postponed, if non-urgent but on the other hand when the surgical implications are of an urgent character, then one should avoid anoxemia during operation and should also avoid shock. These cases may also be greatly helped by the judicious use of some form of digitalis even though this may cause a complete block or complete A-V dissociation. Complete heart block in itself is no contraindication to anaesthesia or operation provided it is not associated with a state of congestive failure. If evidences of failure exist then digitalis must be administered and operation delayed if possible until compensation is restored. Emergency operations, however, may be proceeded with, if anoxemia, again is avoided and the surgical procedures are done expeditiously.

Bundle branch lesions are not considered to be contraindications to anaesthesia or operation provided congestive failure is not present and if found, digitalis must be prescribed.

As I have already indicated in speaking of organic heart disease, appreciation of the etiologic factor is of considerable importance and as stated statistically the coronary sclerotic cases and the luetic cases have a higher mortality rate than do the rheumatic cases during surgery.

Let me now draw your attention to two forms of heart disease, namely the coronary sclerotic and

the luetic, in an attempt to point out the reasons why these types of cases offer a greater operative risk. One must appreciate the fact that these cases usually fall in the same age groups that is over 35 years of age, that they have basically a common underlying impairment of coronary blood flow. In the case of syphilis there is usually involvement of the ostia of the coronary vessels as they leave the first part of the aorta and in the case of coronary sclerosis patchy areas with intimal thickening occur along the various coronary arteries.

These facts would tend to create an underlying impairment of myocardial nutrition. Then add to this the factor of further anoxia during the period of anaesthesia, again add the factor of anemia created by blood loss and in addition the advent of the factors creating varying degrees of surgical shock with a drop in systemic blood pressure as well as associated infections and you will, I am sure, appreciate why these cases as a whole tolerate anaesthesia and surgery poorly. If manifestations of congestive failure or of cardiac arrhythmias are also present you can well understand why these features may become aggravated or accentuated. It is not an uncommon happening in such cases to have develop shortly after the operation, signs and symptoms of a myocardial infarction.

For the various reasons which I have attempted to outline one must always consider these types of cases seriously when they are to undergo surgical operations and must make sure that they also have not had a previous myocardial infarction which is producing referred abdominal symptoms possibly suggesting an acute surgical condition of the abdomen.

How then can we offset this type of cardiovascular complication in surgery? First, I believe, we must be cognizant of the etiology of the cardiac status and fully appreciate the individual's symptoms and complaints indicating impaired coronary blood flow. We should choose the anaesthetic so that it will not be accompanied by anoxemia or create too great a drop in systemic blood pressure, and we should avoid too great blood loss and too much trauma during the surgical procedures.

Post-operatively, these patients must not receive too heavy sedation; during the operation ephedrine and pituitrin should be withheld as they only further induce impaired coronary blood flow. Anticoagulants, as has been so frequently advocated, may be employed to offset the possibility of infarction or thrombosis but in advising this one has to take into account the possibility of hemorrhage developing at the operation site. Complete and careful evaluation of prothrombin times before and during anticoagulant therapy is imperative.

In concluding then this presentation of the operative appraisal of the cardiovascular system there are several points which I think are worth emphasizing. (1) Whether the cardiovascular system presents any evidence of organic heart disease. (2) Etiology of same. (3) presence of past or present manifestations of congestive failure. (4) Evidence of active carditis recent or impending coronary occlusion. (5) Evidence of active endocarditis. (6) If an arrhythmia is present its character as well as an appreciation of its effect upon the efficiency of the circulatory system.

The finding of organic valvular disease if without evidences of congestive failure is no contraindication. Congestive failure and arrhythmias demand proper care and appraisal before operation, as well as appropriate therapy post-operatively. Evidence of active rheumatic or carditis should warrant postponement of all but urgent operations but if urgent then a choice of anaesthesia which will not further impair the patient will be warranted.

In the case of coronary sclerotic patients with insufficiency and/or myocardial infarction all emergent operations should be postponed until the area of infarction has become well healed and revascularized. After healing has occurred an operation may be advised provided care is taken to avoid great fluctuations or drops of systemic blood pressure. If an emergent operation is indicated at the time of an acute coronary occlusion or myocardial infarction then expeditious surgery will have to be undertaken and with the belief one should advise local or intravenous administered sodium pentothal narcosis.

## Obstetrics

### The Physiology of Reproduction The Endocrine Glands and Their Secretions

From the Faculty of Post-Graduate Studies of the Winnipeg  
General Hospital in the Department of Obstetrics and  
Gynaecology.

#### Section "A" No. 4

##### The Thyroid

Harley Hughes, M.D.

##### The Physiology of the Thyroid Gland With Particular Reference to its Importance in Obstetrics and Gynaecology

###### History

1874—Sir William Gull connected atrophy of the thyroid with loss of hair, thickening and dryness of the skin and great loss of mental and physical vigor.

1878—Ord named above myxedema because he thought the thickening of the subcutaneous tissue was due to mucin formation.

1882—Reverdin Brothers; 1883—Kocher: Cured goitre by total thyroidectomy and produced myxedema.

1891—Gley discovered that the parathyroid glands were being removed at thyroidectomy and thus the action of the two could now be separated.

1891—Murray showed curative effects of injections of glycerin extract of fresh sheep thyroid in a case of myxedema.

1892—Howitz, Mackenzie, Fox: Confirmed the work of Murray and showed thyroid to be equally efficacious by mouth.

1894—Emminghans and Reinhold showed thyroid feedings produced a marked reduction in size of certain types of goitre.

1895—Magnus-Levy, using a colorimeter, discovered that heat production was lowered as much as 40% in myxedema.

1895—Barmann showed iodine in a firm organic combination was a normal constituent of the mammalian thyroid.

1899—Oswald observed that iodine was contained in the colloid and the colloid was a globulin; he introduced the terms thyroglobulin and iodo-thyroglobulin.

1916—Kendall isolated a crystalline compound containing 65% iodine which produced the same effects as desiccated thyroid.

1926—Harington determined the empiric and structural formula of thyroxine and established the mother substance of thyroxine as 1-tyrosine.

1927—Harington and Borger synthesized thyroxine which appears to be only the active chemical group of the true hormone which is probably

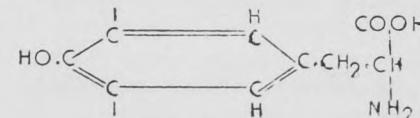
iodothyroglobulin. They also showed that the inactive iodine is in the form of di-iodotyrosine and estimated that normal thyroid was 40% thyroxine and 60% di-iodotyrosine.

###### Biochemistry

The thyroid gland specifically stores the element iodine in the form of a complex protein, iodothyroglobulin. The iodine is contained in the colloid which is a globulin and is called thyroglobulin.

From iodo-thyroglobulin the thyroid hormone is set free; the nature of this hormone has not been completely elucidated, but it is possibly a tri-or tetra-peptide containing radicals of di-iodotyrosine and thyroxine.

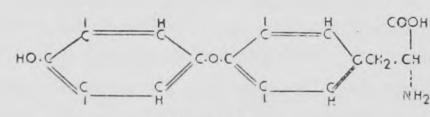
Di-iodotyrosine contains 58.66% of iodine, 3.24% of nitrogen and its chemical structure is closely related to that of thyroxine. The structural formula is 3,5—duo—1—tyrosine and the empirical formula is  $C_9H_9NO_{3.12}$ . Pure crystalline di-iodotyrosine is inactive physiologically in practical therapeutic doses. Di-iodotyrosine is physiologically active only as a component of the thyroglobulin molecule.



**Di-iodotyrosine**

Thyroxin, when first isolated, was accepted by many as the true thyroid hormone. Qualitatively it exhibits all the physiological properties of the thyroid hormone, but there is still disagreement as to whether it possesses the quantitative activity of that hormone. Present knowledge indicates that thyroxin is a physiologically active cleavage-product of the natural thyroid hormone.

Thyroxine contains 65.38% of iodine and 1.80% of nitrogen. Its empirical formula is  $C_{15}H_{11}O_4NI_4$ . It is the tetra iodo-parahydroxyphenyl ether of tyrosine.



**Thyroxine**

###### II. Natural Thyroid Hormone

So far as is known the thyroid is the only gland capable of producing an iodine-containing hormone. No other substance can take the place of this hormone in a body derived of its thyroid.

The natural thyroid hormone constitutes either the characteristic iodine-carrying colloid produced in the thyroid, or a portion of the molecule of the colloid.

As present in the fresh or dried gland, the natural thyroid hormone is absorbed in a quantitative manner from the gastrointestinal tract. Properly prepared and carefully assayed thyroid is the most perfect and less expensive replacement therapy known.

### III. Physiological Functions of the Thyroid

A. T. Cameron summarizes the normal function of the thyroid gland as follows—"While the evidence is perhaps still too indirect to be final, and while we cannot yet trace an intermediate association with oxidation for all the known effects produced by the thyroid there seems to be little doubt as to the general truth of Plummer's view that the thyroid principle exerts an influence on the oxidation proceeding in all the cells of the body and thus produces its actions. Whether such action is catalytic, as Plummer suggests, is not certain. It has been suggested that the essential action lies in facilitation of oxidation in the anaerobic stage and in support of this, it has been found that injection of thyroxine increases the lactic acid concentration in blood. The peculiar fixed limit of the effect on normal oxidation—40% under thyroid control—suggests control of specific reactions rather than an uncontrolled catalysis."

The effects of thyroidectomy (and thyroid hormone overdosage) may be listed as follows:

1. Decreased resistance to various types of non-specific damaging agents occurs with both thyroidectomy and hormone overdosage.

2. Body temperature is diminished (slight increase with hormone overdosage).

3. B.M.R. drops to —40% (hormone overdosage may cause use to plus 100%).

4. Increased glucose tolerance in carbohydrate metabolism (Hormone overdosage diminishes glucose tolerance and causes an elementary glycosuria).

5. Causes a rise in the total lipid content in the blood, especially cholesterol. (Hormone overdosage tends to depress the blood cholesterol).

6. Decreases the urinary elimination of nitrogen (Hormone overdosage causes an increase). The thyroid likely causes an increased destruction of exogenous and endogenous proteins.

7. Decreases blood iodine (Hormone overdosage causes an increase).

8. Calcium and phosphorus elimination are decreased (Hormone overdosage causes a pronounced increase in fecal calcium).

9. Causes a definite tendency toward the accumulation of water in the intercellular spaces (in certain disturbances of water metabolism which are conducive to edema thyroid administration may cause a diuresis).

10. In growing individuals the blood phos-

phatase concentration is decreased (thyroid administration returns it to normal).

11. Occasionally causes some degree of anemia (Hormone overdosage may produce reticulocytosis).

12. In immature growing animals may retard the development of the skeleton, but has little effect on the adult.

13. Decreases cardiac size and pulse (thyroid administration produces cardiac hypertrophy and tachycardia accompanied by an increase in the systolic blood pressure and by peripheral vascular dilation).

14. The Lymphatic organs notably the lymph nodes, thymus, spleen and bone marrow usually show moderate involution (small doses only of thyroid hormone cause growth of lymphatic organs).

15. Usually decreases muscular strength without morphological changes in the muscle.

16. The effect of the thyroid upon the vegetative nervous system is not clear cut, but it appears that the hormone stimulates the excitatory nerve of the various organs whether supplied by the vagus or sympathetic system.

17. Decreases both secretory and motor activity of the gastro-intestinal tract (administration of thyroid has opposite effect).

18. Tends to cause peripheral vasoconstriction which makes the skin cold, usually there also is some hyperkeratosis and deficiency of hair growth.

19. Diminishes the size of the kidney (Hormone overdosage increases it).

20. Causes involution of the accessory sex organs both in the male and female (Hormone overdosage causes the same effect). This is probably mediated through the gonads.

21. The female sexual cycles become irregular or give way to amenorrhoea, following thyroidectomy or severe thyroid hormone overdosage. Here again the effect is presumably mediated through the gonads. Curiously and rather inexplicably thyroid hormone is often beneficial in the therapy of diverse disturbances of menstruation and even in female sterility.

22. Both thyroidectomy and thyroid hormone overdosage tend to diminish the milk production of lactating animals.

### IV. Interrelationships Between the Thyroid and the Other Endocrine Glands

#### **Anterior Pituitary—Thyroid Relationship**

Injections of extracts from the anterior lobe of the pituitary cause a rapid loss of the iodine stored in the gland; there is an increase in blood iodine and an increase in the B.M.R., an increase in the excretion of calcium and creatinine and exophthalmos develops. On the other hand hypophysectomy results in a decreased function of the thyroid gland while after thyroidectomy the anterior lobe of the pituitary hypertrophies greatly. All these findings point to the existence of a thyroid-stimulating

hormone elaborated by the anterior lobe of the pituitary. Loeser, Anderson, Collip and others have separated the specific thyroid stimulating factor from the anterior pituitary and since then sufficient work has been done to conclude that the thyroid may be directly stimulated only by this anterior pituitary substance.

#### Thyroid-Gonadal Relationship

In cretinism and myxedema, sexual development and function are markedly subnormal and libido is impaired. In hypothyroid women menstrual disturbances such as amenorrhoea, hypo-menorrhea or even dysmenorrhea are present frequently. When the hypometabolic state is corrected by thyroid administration the menstrual disorders may clear up also. Enlargement of the thyroid is observed frequently at puberty, at the menstrual periods and during pregnancy after castration there may be a gradual lowering of the basal metabolism with a slow involution of the thyroid gland in rabbits and mice. Da Costa and Carlson found that desiccated thyroid in large doses retarded sexual maturation of white rats while small doses accelerated it.

Such observations as those listed above indicate that gonadal function is influenced in some way by the thyroid and vice versa. Whether or not this is a direct influence is still a subject for investigation by endocrinologists and physiologists. The inclination today seems to be toward the belief that there is a three-cornered relationship between the thyroid, the pituitary and the gonads. In other words, it is thought that many thyroid-gonad effects are mediated indirectly through the pituitary.

#### Thyroid-Thymus Relationship

Experiments indicate that there is some kind of antagonism between the thyroid and the thymus.

#### Thyroid-Pancreas Relationship

Experiments with insulin and the hyperglycemic action of epinephrine show that the thyroid and pancreas are antagonistic.

#### Thyroid-Liver Relationship

The glycogen storage is greatly reduced by prolonged administration of thyroid illustrating the effect of the thyroid on carbohydrate metabolism.

#### Thyroid-Chromaffin System Relationship

Experiments with epinephrine and thyroxine indicate a direct stimulation of the chromaffin system by thyroxine.

#### Thyroid-Adrenal Cortex Relationship

It is thought that the adrenal cortex (and sex glands) acting through the anterior pituitary, normally exercise some regulatory or inhibitory control over thyroid function; when this control is sufficiently depressed or withdrawn, the activity of the thyroid is temporarily increased. Estrogenic

substance present in adrenal cortex and sex glands may be the functioning substance.

#### V. B.M.R. and Its Variations in Menstruation and Pregnancy

The term "basal metabolism" means the minimal heat production of an individual in a fasting condition, at complete muscular rest and under standard conditions of temperature. Basal metabolic rates are expressed in percentage of the normal. When the heat production is greater than normal it is plus; when less than normal, it is minus. The average normal metabolic rate is consequently 0. According to Jackson a rate between minus 10% and plus 10% may be considered within normal limits for clinical purposes.

The thyroid contributes about 40% of the total metabolic activity of the body. The remaining 60% of the oxidative processes proceed without the stimulating effect of the thyroid hormone. Thus, it should be borne in mind that factors other than the thyroid influence basal metabolism. Other conditions which raise the B.M.R. are leukemia, hyperpituitarism and hyperadrenalinism, menstruation and pregnancy, early diabetes cardiac compensation, pernicious anemia, nephritis without edema and fever.

Lowered metabolic rates (-15 to -40) invariably occur in myxedema and cretinism. Adrenal cortex deficiencies, such as Addison's disease cause a marked reduction. Certain forms of hypopituitarism such as Frohlich's syndrome are apt to produce a moderate reduction in metabolic rate.

#### B.M.R. in Menstruation

The B.M.R. is high pre-menstrually and lower during and after menstruation. There is evidence for a second peak and valley in the curve, but the exact time in the period is unpredictable.

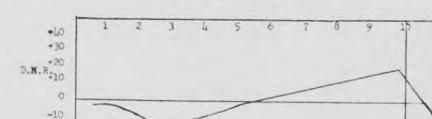


One author has suggested that because of the unpredictable peak it might be wise to take a woman's B.M.R. during their menstrual periods when it is at its lowest point in all patients.

#### B.M.R. in Pregnancy

There is an increased B.M.R. in normal pregnancy. Below is a graph for the B.M.R. in an average normal pregnancy:

#### Lunar Months



The increase in the B.M.R. during gestation has been attributed by Sandford and Wheeler, Hanna,

and others to the active protoplasmic mass of the foetus. Hanna adds that thyroid hyperplasia associated with pregnancy may also be a factor which is tenable since visible hypertrophy of the gland occurs in 41% of pregnant women according to Davis and palpable enlargement up to 90% according to Hilton. The current opinion is that the normal rise in the B.M.R. during pregnancy is due to thyroid hyperplasia concomitant with pregnancy. This theory seems the more likely, but neither view has conclusive evidence.

#### VI. Experimental Studies of the Thyroid During Pregnancy

Peters and Man have shown that the precipitable iodine of the serum (protein bound iodine) uses sharply at the onset of pregnancy from the normal concentration of 4 to 8Y% to concentrations between 6 to 10Y% and remains at these levels until delivery after which it rapidly returns to the normal range. This use is not accompanied by other manifestations of increased activity of the thyroid gland. There is reason to identify the increment of iodine with the thyroid hormone.

There is evidence to suggest that failure of the precipitable iodine to use at the onset of pregnancy leads to early miscarriages which may be prevented by the administration of active thyroid substance. Low precipitable iodine in these cases is not accompanied by other manifestations of thyroid deficiency.

It might be of interest to note that the serum precipitable iodine in pregnancy does not appear to be consistently related to the concentration of iodine preceding pregnancy.

No evidence has been found in a limited number of observations that serum precipitable iodine is abnormal in women with infertility or suffering from toxemias of pregnancy.

J. P. Cher, working with rabbits, noted that in the absence of the thyroid gland hypertrophy of the follicular apparatus resulted from the increased production of follicle-stimulating hormone, but that the life span of the corpus luteum did not seem to be shortened although the pituitary luteinizing hormone was diminished.

From further experiments with thyroidectomized rabbits he concluded that the importance of the thyroid hormone lies in its ability to maintain the vitality and growth of the embryo during gestation.

#### VII. Clinical Studies of the Use of Thyroid Medication in Obstetrics and Gynecology

**1. Amenorrhea**—Haines and Mussey found that in 50 patients, 27 of whom were married; average age 26.9, and average duration of amenorrhea 9½ months and average B.M.R. being —18.1% (—11 to —30%) that 58% were cured, 14% showed improvement and 28% were not improved with thyroid medication.

**2. Oligomenorrhea**—Haines and Mussey found that in 9 patients; 6 whom were married, average age 30.6; average B.M.R. —19.8% that 33% were cured, 22% showed improvement and 44% were not improved with thyroid medication.

**3. Menorrhagia**—Haines and Mussey found that in 15 patients, 12 of whom were married; average age 30; average B.M.R. —20% that 53.3% were cured, 20% showed improvement and 26.6% were not improved by thyroid medication.

**4. Miscarriages and Habitual Abortions** have been attributed by some authors to hypothyroidism. According to Means thyroid medication is an extremely valuable therapeutic measure in habitual abortion. Peters and Man, on the other hand, do not consider the evidence sufficient to support this, citing the fact that total removal of the thyroid of the non-pregnant animal produces sterility but once pregnancy has been established thyroidectomy does not interrupt it.

**5. Sterility**—Myxedema is certainly a well known cause of sterility while complete absence of the thyroid causes sterility in both sexes. According to Means thyroid medication is an extremely valuable therapeutic measure in defective fertility. He advocates that thyroid be administered in any case of fertility when no organic cause can be found whether the basal metabolism is subnormal or not.

Litzenberg and others feel that infertility in women with no pelvic pathology and normal menses may be due to some lesser degree of thyroid deficiency. Litzenberg claims that 50% of sterile women have a B.M.R. under —10% and that 33.5% of these become pregnant soon after the administration of thyroid. He also claims that 40% of women with low B.M.R.'s and no symptoms are sterile while another 40% have functional menstrual disturbances. He defines hypometabolism as —10% or lower.

Peters and Man, on the other hand, feel that there is no conclusive evidence to support these viewpoints.

In the above five conditions it should be pointed out that there is little or no physiological reason for the administration of thyroid; its effects being more or less empirical.

#### 6. Hyperthyroidism

Clinical hyperthyroidism does not appear to influence the normal cause of pregnancy nor to prevent conception. There is a low incidence of hyperthyroidism in pregnancy ranging from 0.08% to 3.7% in goitre districts. The symptoms are the same as without pregnancy. The incidence of toxemia is 77% with hyperthyroidism and 38% in patients with an elevated B.M.R. There is an increased function of the thyroid gland in pregnancy.

and this is especially true in eclampsia where there is an increased amount of circulating thyroxine-like substance. There may be a common factor between toxemia and thyrotoxicosis, but there is no proof as yet. Medical treatment is satisfactory in 90% of cases while surgical treatment such as thyroidectomy and therapeutic abortion is only indicated in severe Graves' disease or severe toxemias.

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## Preventative Dentistry

E. Roy Bier, D.D.S.

Preventative medicine is a common conception. To apply prevention in dentistry usually means general tooth care. Here I want to consider dental measures as means of preventing the development or aggravation of diseases throughout the body, and as a means of ensuring better health and longer life.

What are the conditions in which we have to consider preventative measures?

(1) In our offices we often see patients who suffer from systemic involvement and who have painful dental conditions which must be relieved by surgery under general anaesthesia. Some of these conditions are: acute abscesses, cysts, tumors, pyorrheal disease with or without Vincent's infection, and various periodontal infections.

(2) Specially important are patients who have heart disease, either coronary disease or valvular lesions. In these cases the cardio-vascular status is discussed with the attending physician so that we may have a clear picture of the ailment.

Our first procedure is to ensure a bacteria-free blood stream. We do this by using Penicillin in the form of Procaine-Penicillin. An intra-muscular injection of 300,000 units is given the day before operation, the day of operation and the day after operation. This protects the heart from bacterial damage.

The use of penicillin is a "must." Sometimes sulphadiazine also is given in 7½ grain doses four times daily.

This general protection is aided by careful local treatment of the mouth when pyorrhea, gingivitis, trench mouth or bleeding gums are present. This treatment controls the focal infection and prevents bacteremia.

For the local care we use cotton rolls to protect the lips, cheeks, tongue, etc. Then vastine applicators of pledges of cotton are soaked in iodine and applied, followed by 40% silver nitrate, and salt and water in a mouth wash to which hydrogen peroxide is added. That is half a teaspoonful of salt and two teaspoonsfuls of peroxide in half a glass of water. The wash is used three times daily. A mouthful is held for 30 seconds by having the

patient count slowly up to fifty while holding the solution in his mouth.

Why hold the mouth wash so long? Because this helps to loosen and wash away the bacteria. It takes nine minutes to kill certain anaerobic bacteria, so the wash is not expected to be bactericidal. It only helps to wash them away.

As well as doing our best to destroy bacteria in the mouth and to keep the blood sterile we check up on the condition of the blood itself. We must know how rich it is in haemoglobin and, most important, the bleeding and clotting times. Patients with normal hearts may be given calcium but this must be avoided when heart disease is present. We don't want to get clotting in the wrong place.

When general anaesthesia is to be used we use Oxygen with the nitrous oxide. The oxygen gives the heart strength and sometimes during the anaesthetic we give a few whiffs of straight oxygen, especially at the beginning, about the middle and at the end of the operation. Nature is kind and these heart cases can remain anaesthetised under as much as 20% oxygen. Others might be wide awake under such a mixture.

One has to be exceedingly careful with the anaesthetic in such patients; Heart cases, hypertensives and other cardio-vascular patients are poor anaesthetic risks unless extreme care is used.

I want to emphasize the pre-and post-operative use of penicillin when much local infection is present. It prevents dangerous bacteraemia and hastens and improves healing.

#### Patients With Disease of the Urinary Tract

Patients with venereal disease do not volunteer the information but will admit it usually in a private interview when no one else is present. If the patient is under treatment for V.D. the physician's opinion should be obtained. In these cases penicillin and the sulpha drugs are prescribed. About 90% of the physicians ask us to prescribe the necessary premedication for about 10% of our referred cases. The family doctor or specialist prescribes the necessary pre-and post-operative care for those under active treatment.

### **Patients With Diabetes**

Consultation with the physician gives us a clear understanding of the patient's status. Such patients must be balanced if trouble is to be avoided.

### **Patients With Nephritis**

Nephritic cases are more serious. Pain tends to be greater and healing tends to be delayed. Some of these patients tolerate aureomycin better than the other anti-biotics. The same rule applies to all anti-biotics—they must be given before and after dental surgery.

### **Patients With Arthritis**

Patients who have painful or swollen joints should have x-rays to determine the depth of pyorrhea pockets, the presence of abscesses and other pathological processes. Pre-and post-operative local and systemic medication are necessary to protect the patient's general health.

The extraction of teeth, be they few or many, under local or general anaesthesia, is dangerous to the health of patients who are not properly pre-medicated.

Our aim is to improve the health by removal of dental foci of infection. But to do so without proper local and systemic premedication is to worsen the condition by releasing into the blood stream countless millions of bacteria. This may produce a virulent bacteremia which swamps the body's mechanisms of defense. When the general health is below par this danger is very great and much harm may be done.

Dr. "Bloodgood" says that the local application of 7% iodine and 40% silver nitrate on the day of the appointment followed by the mouth wash mentioned earlier will reduce bacteremia by 75%. So why not do it? The nurse can learn the technique and have the patient ready for extraction.

Coming back to rheumatoid arthritis. Many of the degenerative changes seen in the skeletal joints are also to be seen in the temporo-mandibular joints. Abnormal occlusion may result in inter-articular cartilage disease. Osseous changes are also seen. There are five types. Some are caused by infection—dental or otherwise—but all show bone changes.

Diseases of the joints include, G.C., luetic, tuberculous, pyogenic and rheumatic arthritis; and conditions such as gout, spondylitis, fibrosis, bursitis, etc. All of these are inseparable from dental surgery. Focal infection is inseparably connected with systemic infections and so we must consider dental care as a vital part of Canadian Health Service to humanity.

### **Disease of the Salivary Glands**

Dentists are chiefly concerned with the abnormal output of saliva. Ptyalism (increased salivation) is due to, or increased by, nervousness and by drugs such as pilocarpine, mercury, iodines,

bismuth and bromides. Tobacco and coffee have a stimulating effect. So also have local inflammations such as pyorrhea, gingivitis, Vincent's Infections; and systemic conditions such as pregnancy hysteria and encephalitis.

Diminished secretion — xerostomia — is usually nervous in origin, but certain drugs will cause the mouth to become dry—atropine and morphine for example.

Stones in the salivary ducts lead to dryness and to swelling of the glands. Inflammations such as mumps have the same effect. Dry mouth makes for difficulty in swallowing and in the mouth there is danger in the copious secretion. Great care is necessary in these cases during anaesthesia in order to prevent asphyxia. Suitably placed rubber drainage tubes, hot compresses and lamp heat are necessary. So are the sulphas and anti-biotics. Patients with such conditions are best treated in hospital where other factors such as diet, laxatives and sedatives can be controlled.

### **Epilepsy, Convulsions**

Patients who take fits may have one in the waiting room. They should be prevented from biting the tongue by placing a cork between the teeth. When the history is known preliminary barbiturate administration and also 1 c.c. of demerol before operation will keep them quiet.

**Stokes-Adams Attacks** mean serious heart disease. The pulse beats very slowly because of ventricular systole. Adrenalin solution 1-2000 up to 5 c.c. should be injected. When the history is known preliminary medication may avert an attack in the office.

**Carotid Sinus Syncope** is due to pressure by collar or neck wear upon a sensitive carotid sinus. Syncope from this cause can be avoided by leaving the neck free from pressure.

### **Heart Disease Again**

Because cardiac cases are the most serious from the stand point of dental surgery I make reference to it again.

Fifty per cent of heart cases have pyorrhea or focal infection about the roots or both.

All heart cases require dental care because in this way disaster may be prevented.

The nature of the heart disease is suggested by the age of the patient. In children and people under 40 it is most likely to be rheumatic heart disease. In adolescents and middle aged people hypertensive heart disease becomes more common as age increases. In the forties and fifties coronary disease is common and increases with age.

Luetic heart disease is seldom recognized in people under forty.

In order to be sure that the patient will be properly safeguarded we insist on having certain data. This is the Necessary History in Heart Cases.

**Necessary History in Heart Cases:**

1. When did you see your physician last? Name and address of M.D. Can we phone your physician?

Patients are quite willing to answer enquiries and feel better satisfied if dentist is properly informed of case.

2. Do you have pain over the heart in Sternum or Breast Bone?

Does it pass up to arms and side of neck? If so, suspect Angina Pectoris. Surgical risks are increased with Angina Pectoris.

Cardiac decompensation of any kind, also in Coronary Thrombosis and Nephritis (kidney disease).

3. Do your ankles swell? (Oedema).

4. Have you had Rheumatic Fever? High Blood Pressure?

5. Have your ancestors or present relatives any of above symptoms?

6. Do you have shortness of breath, on climbing stairs? Do you have to pause half way up?

7. Patients consider dental examinations more complete if dentist shows any interest in patient's welfare.

8. Are you nervous? Do you faint easily? (Benign Syncope).

Fainting may occur at the sight of dental instruments—prick of a needle—overheated room—sight of blood. Fear and anemic condition of brain is cause of this fainting. Lower chair or have patient lie down on couch. Give them smelling salts. 1 teaspoonful of aromatic spirits of ammonia in  $\frac{1}{4}$  cup of water. Have patient swallow same.

**Diseases of the Blood**

It is important to know the quantity and quality of the patient's blood. Some patients tend to bleed and this is serious in the presence of anaemia. I have had many narrow escapes in cases of prolonged bleeding due to conditions such as hemophilia even when only one or two teeth were extracted. Then one has to pack the sockets and give blood or plasma intravenously. When one knows that bleeding is likely to be prolonged, pre-operative medication is used for weeks or even months ahead. Calcium by mouth and vitamine K intramuscularly are given.

**Diseases of the Lungs**

Unhealthy mouths and unhealthy lungs are often associated. Hence dental surgery may be a powerful preventative of serious lung disease. Removal of periapical abscesses and the treatment of pyorrhea are essential when the lungs are weak or diseased.

Preventative dentistry may assist in reducing the incidence of the "common cold." The dentist should protect himself by wearing a mask. Most important from the preventative stand point are: lung abscess, chronic bronchitis. Abscess may

develop from the aspiration of pus from the mouth. Broncho-pneumonia may be caused in the same way.

**Diseases of the Gastro-Intestinal Tract**

Mayo estimated that at least a quarter of all gastro-intestinal diseases had its origin "above the clavicle."

Just think how important a healthy mouth is for a healthy stomach and bowel. If the teeth are bad the patient can't chew properly. If the mouth is dirty millions of germs are swallowed with every mouthful of food. If in addition the food and drink are unsuitable the stomach becomes inflamed and the bacteria of the mouth attack the lining of the stomach and bowel.

Keeping the mouth clean goes a long way to ensuring healthy digestion, proper assimilation and good health.

**Pain**

Most patients are forced to the dentist because of pain and most people know from experience what toothache is like.

There are, however, other pains not directly connected with the teeth—tic doloreux or trigeminal neuralgia in which the pain is wide spread and very severe. There are certain general headaches due to dental disease—headaches due to impacted teeth. And teeth may be to blame for glossalgia or painful tongue.

Let us now consider these local and generalized pains.

Pains about the face and head may be due to disease in the teeth or to disease which is only associated with dental disorders. The pain may be constant or intermittent. Heat will make it worse if there is hyperemia with dying or dead pulp, or when the pulp chamber contains gases which are expanded by heat.

When cavities are present we must find out how many and how deep these are, and that requires x-ray examination. We also look for the swollen, red gums, pyorrhea pockets, etc., which indicate periodontal disease.

Trigeminal neuralgia is not due to dental disease but often it causes toothache. It is exceedingly severe and often very difficult to treat. The cause of true tic doloreux is not clear, but there is a atypical neuralgia (has similar symptoms) which gives pain in the same places but which can be cured by removal of abscessed, putrescent or impacted teeth. Or it may be caused by decayed teeth with large pulp-stones or pulpitis, or focal infections of various kinds. Tumors-cysts, osteomyelitis may also be causes. Removal of pathological areas removes the cause of neuralgia and so cures it. The cure of such misery is always a dental triumph.

**Headache Associated With Impacted Teeth**

An important and often neglected cause of head and face pain is impaction of the teeth. Impacted

teeth occur in 15% of the population and 33% of impacted teeth cause headaches. Frequently these headaches are diagnosed "migraine." I have about 40 histories diagnosed as migraine that cleared up after removal of impacted teeth. These are characters of headache associated with impacted teeth:

The site of pain—back of neck, temporal region, top of head.

Headaches due to sinus trouble, associated with abscessed teeth below antrums—x-rays of teeth, x-ray of sinuses.

Forehead—over eyes—top of head—under eyes—antrum.

Behind eyes—sphenoidal and ethmoidal sinuses. All may be wrongly diagnosed as migraine.

#### **Glossalgia—Pain in the Tongue**

Stomatitis, canker sores, cold sores, sharp teeth, ill-fitting dentures.

#### **Other Causes of Head Pain**

Eye strain, alcoholism, constipation, etc. Or the pain may be of functional origin.

#### **Psycho-neurotic Pain**

The chief point about psycho-neurotic pain is that it has no organic basis. The gums, the teeth, the tissues of the jaws, mouth and face are all

normal. These pains occur in high strung, nervous individuals. They may be felt in or radiated from the jaws and teeth. One has to be cautious in calling a pain psycho-neurotic. I had a patient with diabetes whose jaws ached for four months after extraction. When the diagnosis was made and she was given insulin the pain disappeared.

#### **Headache and Face Pain Due to Allergy**

Almost any food stuff can cause allergic reactions such as swelling, headache, rashes, etc. One must be sure that the cause is found. But all the non-dental causes of headache and face-pain will be helped by making a dirty mouth clean.

In the above I have brought out the relationship between mouth-health and general health. We can help the physician in several ways. First we can remove foci of infection which undermines health. Second, we can protect his patient during the time of extraction. Perhaps we can even help to prevent the development of certain disease. By removing impacted teeth we can remove intractable headaches which cannot otherwise be helped.

All this is prophylactic dentistry in the wide sense. It not only saves the patient's teeth, saves his health and even his life.

## Cancer



### **Cancer Diagnostic Service**

#### **A Report on the First Year's Operation**

R. F. Friesen, M.D.

Somewhat over a year ago the Manitoba Medical Association and the Manitoba Cancer Relief and Research Institute jointly announced the institution of a Cancer Diagnostic Service intended specifically for residents of rural Manitoba in straitened financial circumstances, who are suspected by their doctors of having cancer. Essentially, this is a referral service giving general practitioners ready access to specialized consultants' services, in problem cases where cancer is suspected. By insisting that all patients be referred, the essential part which the general practitioner plays in cancer diagnosis is emphasized. When the diagnosis is established a complete report is sent to the referring doctor. To keep him informed, and to help him discuss the case with the patient's relatives, a progress report is sent upon request, or in cases where a considerable period of time is required to complete the investigation.

To avail himself of this service the doctor merely fills in the special referral form which states that he has found symptoms suggestive of malignancy in the patient who, in his opinion, cannot afford to pay for the further investigation required. After having the card countersigned by

the proper municipal official, the patient takes it with him to the hospital of his choice. Booklets of referral forms have been mailed to all practising doctors in Manitoba, and more are available upon request.

There is no charge to the patient for the service. The medical services are provided without charge by all doctors participating in the work of the clinics. The cost to the hospitals of all diagnostic procedures and hospitalization is met by the Manitoba Cancer Relief and Research Institute. These privileges are available to residents of all Manitoba, exclusive of the Greater Winnipeg area. The portion of the Municipal Commissioner's levy which is used to meet the costs of this service, does not apply to the following areas, and consequently residents of these areas are not eligible:

City of Winnipeg

City of St. Boniface

Town of Tuxedo

Town of Transcona

Village of Brooklands

Rural Municipality of St. James

Rural Municipality of Fort Garry

Rural Municipality of St. Vital

Rural Municipality of East Kildonan

Rural Municipality of West Kildonan

The service is restricted to diagnosis and in no way alters previously existing arrangements for treatment. If a doctor has made a definite diagnosis of cancer in a patient, as for example, if he has had a positive biopsy report, and wishes to refer him for treatment, the referral should be made on a private basis, or to a hospital as a public ward patient rather than to the Cancer Diagnostic Service. A patient whose diagnosis is made by the Cancer Diagnostic Service has the privilege of electing to have any necessary treatment carried out by the doctor of his own choice. Most of them cannot afford this, and are treated on a public ward basis.

During the first three-month interval 15 patients were seen; during the second, 18; during the third, 20; and in the final quarter, 27, making a total for the year of 80. Of these, 62 were investigated at the Cancer Diagnostic unit at the Winnipeg General Hospital, and the remaining 18 at the unit at the St. Boniface Hospital.

**Table 1**

Site of Malignant and Non-malignant conditions found in 78 patients:

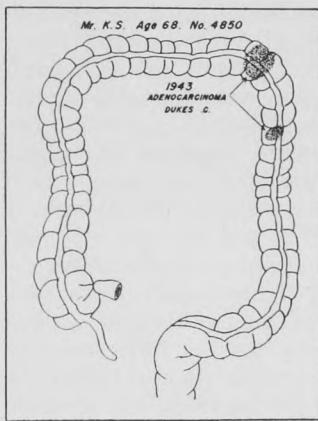
	Malignant	Benign
Breast	8	7
Skin	6	4
Uterus (Incl. cervix)	6	2
Lip	6	1
Stomach	3	7
Buccal Cavity	3	1
Rectum	3	—
Lymph Nodes	2	1
Pancreas	2	—
Colon	1	2
Kidney	1	1
Testicle	1	1
Thyroid	1	—
Epiglottis	1	—
Primary Unknown	1	—
Pharynx	—	1
Brain	—	1
Hemorrhoids	—	1
Cystocele	—	1
Polycythemia vera	—	1
Progressive Muscular Atrophy	—	1
Total	45	33
	—	—

Table 1 lists the diagnoses established during the first year, and indicates the type of cases being

referred. Of the 80 cases investigated, 45 (or 56%) were found to have cancer; in 33 (or 41%), non-malignant conditions were found; and in 2 cases no definite diagnosis was made. When the service was initiated the fear was entertained that some doctors would interpret the meaning of "symptoms suggestive of malignancy" too broadly, and refer too many problem cases in whom cancer was a remote possibility. That this has not happened during the first year is at once apparent from the proportion of malignant and non-malignant conditions diagnosed. These figures rather suggest the opposite—that patients are not being referred until there is too strong a suggestion of cancer. In the interests of more successful treatment it would seem to be advisable to refer patients before the signs and symptoms so obviously suggest malignancy.

Fifty-one doctors utilized the service during the first twelve months. A study of the addresses of these doctors and of the patients they referred, shows that the majority of these patients came from the more isolated or sparsely populated parts of the province. Because, in general, these are the areas where medical facilities are least fully developed, this suggests that the service is being used as was intended—to supplement rather than to replace the facilities the doctor has available locally. If it is possible to do so, it is obviously more efficient and more convenient for the patient to have the entire investigation carried out without leaving his home community.

The Cancer Diagnostic Service is a co-operative venture on the part of numerous parties interested in the problem of the early diagnosis of cancer. In a venture on as wide a scale as this, it is inevitable that problems should arise. As the agency entrusted with the responsibility of administering the project, the Manitoba Cancer Relief and Research Institute is desirous of learning of these problems with a view to their solution. Geographic proximity makes discussion with hospital authorities and the doctors who staff the units relatively simple. The other group most intimately concerned, namely the referring doctors, is scattered throughout the province. Suggestions from this group as to how the service might be made to serve them more effectively should be sent to the Manitoba Cancer Relief and Research Institute.



## The Incidence of Multiple Malignant Growths of the Large Bowel

P. H. T. Thorlakson, M.D.

Multiple malignant tumors may be encountered anywhere in the large bowel. The incidence of multiplicity increasing to reach its maximum in the sigmoid and rectum.

It is widely held that the reason for the simultaneous or successive development of malignant lesions is the occurrence in the colon and rectum of benign adenomata in some proportion of the population.

Young<sup>1</sup> has recently reported on the findings in 500 asymptomatic patients subjected to routine sigmoidoscopy. In 3.8% adenomatous polyps were found to exist.

In order to determine the incidence of adenomas within the population, Helwig<sup>2</sup> of St. Louis, examined the colon in 1,460 consecutive autopsies. Adenomas were found in approximately 10%. He noted that after the age of 30, there was a constant progressive increase in each sex to reach the greatest incidence in the eighth decade. Multiple adenomas were present in about 40% of the cases affected. The sigmoid flexure was the most frequent site of adenoma formation and the most common locality for adenomas undergoing malignant transformation. Of the 139 persons in whom adenomas were found, 10 possessed one or more adenomas with cancerous change present. Helwig concludes his paper by stating that if his group of cases is representative of the evolution of carcinoma of the large intestine in general, then the majority of carcinoma of the colon develop in benign adenomas. This is in agreement with Gordon-Watson<sup>3</sup> who states that there is abundant clinical and pathological evidence to support the tendency to transition from innocent to malignant lesions. He said it was open to doubt if an epithelial tumor of the bowel is ever malignant in the very earliest stage.

A review of 282 consecutive cases of carcinoma of the colon and rectum observed over a 10-year period at the Winnipeg Clinic reveals the following statistical information:

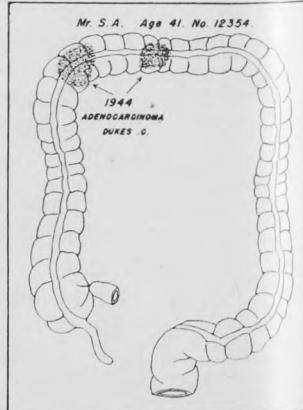
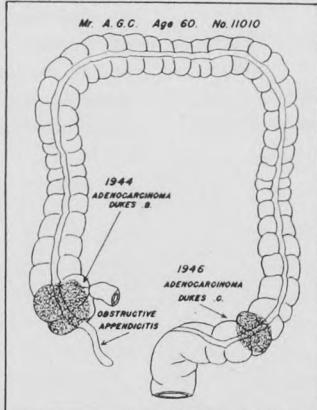
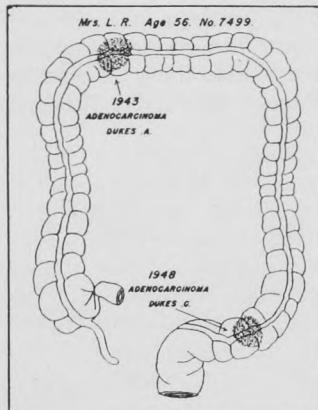
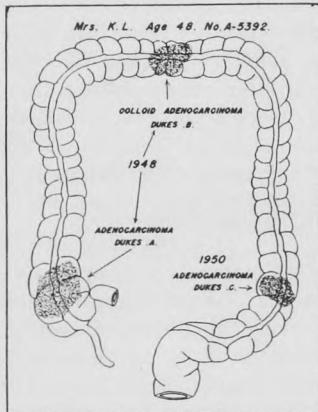
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|---|-------------------|
| (a) Carcinoma associated with innocent adenomatous polypi | 61 cases or 22%   |
| (b) Multiple carcinoma                                    | 18 cases or 6.34% |

During the same period 71 cases of single or multiple innocent colonic and rectal polypi were observed.

The illustrations herewith are representative cases belonging to this series.

From a review of the literature and on the basis of this study, the following conclusions appear to be justified:

1. Multiple primary carcinoma of the colon and rectum are relatively uncommon, nevertheless the incidence is such



as to influence the investigation and surgical treatment employed in any individual case of suspected malignancy.

2. Routine exploration should include inspection and palpation of the entire colon to exclude multiple lesions before proceeding with the radical removal of a carcinoma of the colon or rectum.

3. The discovery of one or more simple polyps in the vicinity of a malignant lesion during the process of establishing an anastomosis is one point in favor of the open over the closed method of resection.

4. Where one or more benign adenomas are found associated with a malignant ulcer, a more generous segment of bowel should be resected to eliminate a potentially malignant area of mucosa.

5. The onset of obstructive symptoms occurring in a patient who previously has undergone a resection for carcinoma of the bowel should raise the suspicion of a new primary carcinoma rather than the assumption that obstruction is due to local extension of the original lesion.

6. Patients who have undergone removal of a malignant lesion of the bowel should return for a follow-up with sigmoidoscopy and a barium enema at regular intervals.

7. Recognition and awareness of the fact that carcinomata evolve frequently from pre-existing adenomata and papillomata will go far in reducing the morbidity and mortality from malignant disease of the colon and rectum.

The review of 282 consecutive cases of rectal and colonic carcinoma investigated over a ten-year period serves to re-emphasize certain significant facts:

(a) Multiple primary carcinomas occurred simultaneously or at widely varying intervals of time in 18 cases or 6.34%.

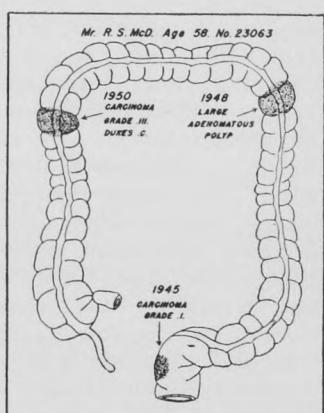
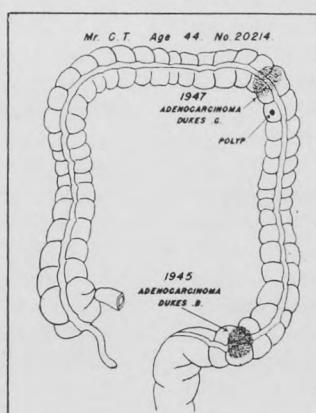
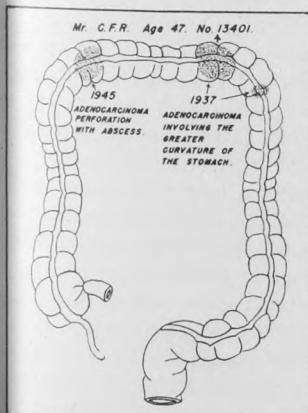
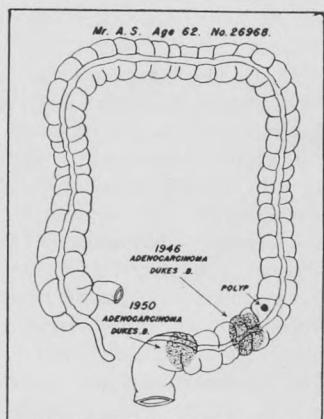
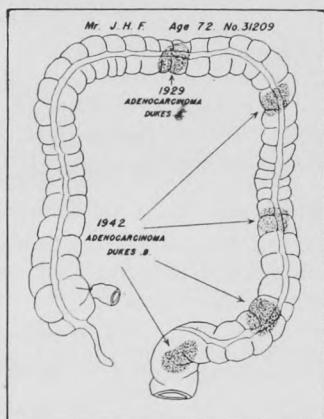
(b) A history of carcinoma or adenoma occurring in several members of the same family suggested a strong hereditary tissue pre-disposition in certain individuals.

(c) The association of benign adenoma and carcinoma occurred in 61 cases or 22% of the series, giving support to the view that epithelial hyperplasia-benign-carcinoma is a common sequence.

(d) Cases of single and multiple adenomas were encountered in which microscopic evidence of both innocency and malignancy has been present not only in distinct and separate lesions but also in the same tumor.

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## Winnipeg Medical Society

Reported by Eric R. Gubbay, M.D.

### Internists Section

First Meeting 1951 - 1952

Chairman: Dr. J. D. Adamson

Dr. Adamson expressed his thanks to members for election to the Chair. An account of the papers read is given below.

Dr. A. Thompson

#### Diurnal Variations in Electrolyte Excretion

It is known that rhythmic daily variations occur in spontaneous activities of the living organism, for example in sleep rhythms, in heart rate, in body temperature, and in urine output. It has long been known that less urine is excreted during the night than during the day, and that associated with the nocturnal oliguria there occurs a diminished excretion of salt. Disturbance of this pattern occurs in a variety of diseases, including Addison's disease, cardiac failure, renal failure, and cirrhosis of the liver. These disturbances of the normal rhythms are as yet largely unexplained. Further, although the biological rhythms of sleep and urinary excretion are known to be linked, little is known of the renal or other mechanisms involved in the physiology of the normal.

Urine is formed by the passive process of glomerular filtration followed by the active addition or subtraction of substances to or from this filtrate by the renal tubules. According to Homer Smith, of about 180 litres of filtrate passed through the glomerular bed in twenty-four hours, only about 1.2 litres is excreted. 99.4% of the water is reabsorbed. Of the amounts of sodium and chloride passing the filter, similar high percentages are reabsorbed and only some 7% of the potassium filtered is excreted. It follows that small changes in reabsorption could cause loss of large quantities of electrolyte. Thus if 98.4% of sodium (instead of the normal 99.4%) is reabsorbed, about double the normal loss of sodium would occur and serious depletion would result in the short period of three days. (Slide One was then put on the screen). This slide shows clearly the very considerable fall in excretion of sodium, potassium, chloride and bicarbonate that occur during sleep. The magnitude of the changes in electrolyte excretion in this cycle is far greater than has hitherto been appreciated. The peak levels of the rates of waking excretion of sodium and chloride are frequently five to six times the average nocturnal rates. Excretion of bicarbonate follows the same general pattern but the changes are much more striking. This slide also shows the fall in creatinine and inulin excretion during sleep. These latter

changes, whilst demonstrable, are never of the order of the changes seen in electrolyte excretion. They seldom fall more than 5% of the waking values and never more than 10%. As inulin and creatinine excretions are a measure of the rates of glomerular filtration, it seems unlikely that this mechanism, either alone or in large part, accounts for the great rhythmic changes in electrolyte excretion which have already been demonstrated.

(Slide Two). This slide shows that variations in the rhythm are not necessarily due to sleep. The peak values of chloride excretion (and of urine excreted) occur about mid-day and there is then a progressive fall towards the late afternoon and evening which in turn is followed by a further fall with the onset of sleep. Moreover it has been possible to demonstrate the rhythmic fall during the night hours in a subject actively engaged in laboratory work throughout the hours of the night. The customary morning rise in excretion follows the next morning, although the subject was at the time soundly asleep.

This basic pattern of increasing matutinal excretion of electrolytes followed by a progressive afternoon fall in excretion leading to a further fall during the night, having been established, various attempts were then made to interfere with it.

1. Using a one litre load of water as a physiological stimulus, it was not possible to disrupt the normal pattern of electrolyte excretion. Such load of water, when given in the morning, did not alter the increasing electrolyte excretion to be expected at that time, nor was it able to halt the expected fall in electrolyte excretion when given in the afternoon. Slide Three also shows that the peak rate of water excretion after a one litre load is greater in the morning than in the afternoon. Instead of the water load interfering with the established rhythm of electrolyte excretion, the latter was able to influence the peak rate of water excretion.

2. Prolonged fluid deprivation for as long as three days has been unable to disrupt the pattern.

3. As both water diuresis and water deprivation failed to interfere significantly with the established rhythm, it was to be expected that the effect of pituitary antidiuretic hormone (whose secretion is controlled by hypothalamic osmoreceptors) would be negligible. This also has been demonstrated.

4. Salt deprivation of the magnitude that results from a nine-day period of a strict Kempner rice diet was also without effect on the rhythm. It is true that the total excretion of sodium and chloride falls to very low levels on these diets and the main electrolyte excretion is that of potassium.

and bicarbonate. Nevertheless under these circumstances the very low levels of excretion of sodium and chloride during the day are followed by demonstrably lower levels during sleep. Excretion of potassium and bicarbonate follow the expected pattern both in the amounts excreted and in the rhythmic variations that occur.

5. Repeated doses of Desoxycorticosterone acetate were unable to alter the effects of the spontaneous rhythm although sodium retention was demonstrable on the background of the dominant cycle.

6. A single experiment with ACTH showed that it did not have parallel effects on sodium and potassium excretion as would be expected if it were able to interrupt the diurnal cycle.

Finally attempts were made to reproduce the cycle experimentally. It was possible to show that the induction of alkalosis either by giving sodium bicarbonate or by voluntary hyperventilation caused an immediate increase in excretion of sodium, potassium, bicarbonate and chloride. Irrespective of the time of day during which alkalosis was induced, it was possible to completely disrupt the normal rhythm by this artificial stimulus.

This paper stimulated a good deal of interesting discussion. Dr. J. D. Adamson pointed out that this paper cast a shadow on our previous reliance on water excretion tests, for in reaching conclusions we had neglected the demonstrable dominant daily rhythms. Dr. Jessie McGeachy asked, "Do the renal tubules act like the sinus node generating a spontaneous rhythm, or are they under the control of rhythms originating in the central nervous system?" She reminded members of the demonstrable changes in the electroencephalogram which occur during alkalosis.

Dr. S. Israels stated that workers in the Mayo Clinic and elsewhere had demonstrated changes in acid-base balance following leucotomy and cerebral vascular accidents, and that this might bear relation to the suggestions put forward.

#### Dr. A. B. Houston

#### Auricular Fibrillation and Plasma Quinidine Levels

(The introductory remarks sketched the historical background of the subject. The therapeutic necessity of obtaining adequate blood levels having been repeatedly stressed, it was decided to undertake the following study).

#### The Effect of a Single Dose on the Plasma Level

Slide Two shows that the maximum plasma quinidine level occurs about two to four hours after the administration of a single oral dose. The level has dropped to about 50% of its peak at eight hours and very little quinidine is demonstrated at twelve hours after the dose. It shows also that there is marked difference between the

peak levels after the same oral dose in different persons. Therefore it was decided to study intra-individual variability, and accordingly six subjects were given the same dose of quinidine sulphate on two different occasions. Slide Four shows that no individual showed entirely consistent responses, but the differences that occurred were less than those from person to person.

As the intra-individual response is less variable the relationship of dose to plasma level was then studied by giving each of four individuals single oral doses of 2 to 15 mgm/kgm on separate occasions. Slide Four (a) shows that a higher plasma level follows a higher dose but there is no strict correlation to be established.

In order to attempt to explain the variability in plasma levels the urinary and stool excretion was studied. In twenty-six observations the percentage of the dose excreted in the urine varied from 1 to 30% but was less than 10% instances. The amount excreted was not related to either the urine volume, the dose or the plasma level obtained. The 24-hour stool was obtained by giving indigo carmine as an indicator. Analyses made on five subjects after a fasting oral dose of 1 gm. showed that from 1 to 3% of the given dose was passed on in the stool. These results provide no explanation for the variation in plasma levels which may, however, be still due to differences in rates of absorption, a point which could not be studied in the methods described above.

#### The Effect of Repeated Doses on the Plasma Level

Slide Five gives details of the ten cases studied as to age and sex, diagnosis and result of treatment. These were all cases of auricular fibrillation. They were given quinidine according to the custom of the various attending physicians.

Slide Six shows the plasma quinidine levels obtained from the differing dosage schedules used by individual physicians in the previous slide.

(a) Doses spaced at twenty-four hour intervals produced no cumulative effect on the plasma level. This could have been expected from our previous observations that very little effect of a single oral dose is demonstrable in the plasma after twelve hours. Further it is to be noted that doses of 1 gm. given in this way produced peak levels between 2.5 and 3.5 mgm./l.

(b) Doses of 1 gm. spaced at eight-hour levels in two trials produced an irregular sustained level between 4 and 5 mgm./l.

(c) With doses spaced at four hours or less the blood level showed no tendency to fall. Where doses of 0.2 to 0.4 gm. were given every three to four hours, a plateau was reached (after an initial smooth climb) at twelve to twenty-four hours, the level of this plateau varying between 3 to 5 mgm. %.

(d) Doses of 0.6 to 0.8 gm. every three hours used in one case tended to produce increasingly

high values up to 11 mgms. % when treatment was discontinued without effect.

#### **Relationship of Plasma Quinidine Level to Therapeutic Effect**

The results consist of twelve trials on ten patients. Normal rhythm ensued in five instances. In one of these resumption of normal rhythm may have been spontaneous. In the remaining four cases normal rhythm did not occur until plasma quinidine concentration was 3.0 mgm./l or greater.

This important paper was then open to discussion. Dr. R. Beamish reported that he had been able to convert auricular fibrillation to normal rhythm by using a combination of quinidine and pronestyl (procaine amide) which had first been advocated for disorders of rhythm originating in the ventricles. The importance of this observation—which had also been made independently elsewhere—is obvious, for the conversion by this combined method may carry less danger of toxic effects than when quinidine alone had to be built up to very high levels. Dr. F. Mathewson agreed that all recent cases of auricular fibrillation should be treated with the aim of conversion to normal rhythm. He remarked that occasionally the unexpected occurrence of fibrillation might indicate the presence of a latent myocardial infarction.

Many speakers made reference to the work of Sokolov in this field. The original paper should be carefully studied by any practitioner who prescribes quinidine. For the convenience of readers the writer, reporting the above paper and the discussion that followed, is summarizing a few relevant points from Sokolov's paper.

1. The effect of a single oral dose—the peak effect is reached in two to three hours. The effect wears off as described above.

2. A plateau effect (similar to that described by Houston) is reported by Sokolov after five oral doses at two-hour time intervals. After this, wastage and replacement balance one another.

3. Indications for the use of quinidine in cases of auricular fibrillation. As the writer sees it there was a substantial measure of agreement in the recommendations brought forward.

(a) In the absence of heart disease—conversion should be attempted in all cases. In thyrotoxic

cases many will prefer to defer the attempt, until the thyrotoxicosis has been controlled.

(b) In the presence of heart disease, if there is little evidence of enlargement and little evidence of failure, Houston recommends attempted conversion preferably in early cases. Skolov recommends attempted conversion if these patients are suffering with symptoms (palpitations and dyspnoea) not controlled by digitalis.

(c) In the presence of heart disease with considerable enlargement and chronic failure, conversion is only to be attempted if the crippling effects of the disease are not controlled by the standard regimes for heart failure.

(d) Multiple embolism is now regarded as an indication for attempted conversion! This startling reversal of indication and contraindication is ably discussed in Sokolov's paper.

#### **The Dangers of Quinidine**

4. Stress is to be laid on the E.K.G. evidence of bundle branch delay, bundle branch block, and ventricular extrasystoles. The classical clinical features of poisoning are to be watched for. Sokolov believes that at blood levels below 9 mgm. %, dosage can be increased with confidence in the absence of other evidence of toxic effects. Where blood levels of 9 mgm. % have been achieved, great caution is to be exercised in increasing dosage, even in the absence of other evidence of toxicity.

#### **Dosage Schedule**

5. Houston recommends 0.4 mgm. four hours the first day and an increase of 0.2 mgm. per dose per day if conversion is not obtained. Constant clinical and E.K.G. control is essential. Late bundle branch block as a herald of disaster may remain undetected unless it is looked for. Some clinicians aim at the ideal of obtaining cardiographic control before allowing any single new dose of quinidine to be given. (Various dosage schedules are recommended by Sokolov—the original paper should be consulted).

#### **References**

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## Medico-Historical

Submitted by Dr. E. S. Moorhead

### Dublin Doctors

"Sir, I'd have you know that Ireland had culture, arts, literature and science when England was but an ovum in the ovaries of time." So ended a heated discussion between two doctors. There was some basis for the statement; remains of the only bronze smelting furnace so far discovered in the British Isles were found near Dundalk; the date was estimated by archaeologists at 1800 B.C. Irish gold ornaments have been found in the graves in Norwegian burial places 1,000 years old. St. Columba founded a monastery at Kells in the sixth century, and it was here that the Book of Kells, said to be the most beautiful in the world, was transcribed in the eighth century.

It was not until the early part of the 19th century that Dublin doctors through their researches acquired a reputation that brought students from all over the world; in 1800 there were sixty medical students in Dublin, in 1836 over one thousand. The men mainly responsible for such a growth were Sir Dominic Corrigan, Colles, Graves, William Stokes, his son Sir William, and Barnes. Your familiarity with their names shows how outstanding was their work. However, I am not going to write at present of the diseases to which their names are attached; it was not that which brought students from Europe and elsewhere; they revolutionized teaching at the bedside and in the wards.

You must understand that at that time there were numerous private schools of anatomy, and fees were paid to the instructors. Fees were also paid to members of the hospital staffs, for instruction on diseases. Walking the hospitals was a statement of fact and not a poetical fantasy. Leading doctors following the example of Hunter had their museums and it was said that these had to be guarded carefully; a confrere calling on you would bring a large umbrella, called a gamp, and in an unguarded moment he might drop into the folds of it one of his host's specimens with which he could prove or disprove a subject under discussion. Lectures were given in a corrupt form of Latin. Robert Graves is credited with introducing English about 1830.

Colles' name is more frequently associated nowadays with a fracture, but his distinction and fame rest mainly on his work on syphilis. The hospital where I worked was in a poor area of the city and near the north Dublin workhouse and stories about Colles still existed. Labourers, patients of his who were crippled following a fracture, frequently ended up in a workhouse (a refuge for impoverished and crippled

people). Colles visited them bringing presents of tobacco, etc.; he was also on friendly terms with the staff. Some night a messenger would arrive telling him that so-and-so had died. Colles would drive over, do a hurried amputation and add the specimen to his museum for further study. You will appreciate that he might have to wait many years for the answer to the problem which puzzled him. He was a graduate of Trinity College, and held the license of the College of Surgeons of Ireland and the M.D. of Edinburgh. On one occasion he walked from Edinburgh to London a distance of 400 miles.

He abhorred statements loosely made without adequate foundation, and at his classes took every opportunity to repress premature theorising on the part of his pupils. It is stated that he often had 300 at a lecture. He taught regional anatomy with reference to its surgical bearing; you should know that up till that time teaching was by systems; the nerves, vessels, muscles, viscera, skeleton were studied as separate organizations. I quote from his *Surgical anatomy* "While systems of anatomy are multiplied beyond number, we have scarcely any elementary treatise the sole object of which is to describe the relative position of the parts, or to point out the subserviency of anatomical knowledge to surgical practise. To supply that defect for the pupils of this school is the design of the present book."

Sir Dominic Corrigan who was born in 1802 and graduated from Edinburgh did most of the work for which he was known before the age of 40. His studies on the heart and circulation aroused great interest because little had been done on this subject since Harvey's time two centuries earlier. Much of his teaching was done from the basis of six beds in Jervis St. Hospital. His studies on the left ventricle and aorta were done before he was 30 years of age. He described "Permanent patency of the mouth of the aorta or inadequacy of the aortic valves." He differentiated it from aortic stenosis, pointed out that death was never sudden, and insisted on the bad effects of bleeding, blisters, starvation and digitalis. He discussed aortitis as a cause of angina pectoris, and wrote on aneurism. In 1830 he wrote on epidemic fever in Ireland and the relation of typhus to starvation. (When I was a student typhus was supposed to be spread by emanations from the body of the sick person). In 1838 he published an article on cirrhosis or fibrosed lung and tubercular phthisis.

It was said of him that he never lectured more than half an hour. He left a dictum with regard to the subject of life insurance which suggests

that we are still discussing century old problems. "You should not answer questions about patients unless you have made a special examination." He was given a baronetcy for his work in a cholera epidemic, a rare honour for a R.C. in those days.

William Stokes was born in 1802, took clinical medicine and sciences in Dublin and in Edinburgh, came under the influence of Prof. Allison who stimulated him greatly. In 1825 he published a small treatise on the use of the stethoscope (Laennec). It was the first in Britain. Ten years later Sir H. Acland, then a student, had to withstand the ridicule of an able teacher for devoting himself to the mastery of it.

Appointment to the Meath Hospital in 1825 brought him friendship with Graves and the two started a salutary and much needed reform of clinical teaching. It drew crowds of students not only from England and Scotland but from the continent and America. It did not consist of spoon-feeding or cramming students with masses of facts available for purposes of examination, but in systematic effort to teach the individual pupil, to encourage him to learn, to show him how to teach himself, to bring him into the true relation in which he ought to stand with his instructor, to make him familiar with bedside medicine, to show him the value of every new fact and observation in medicine and to make him know the duty as well as make him taste the pleasure "of original investigation."

Stokes and Graves, in 1834, revolutionized the treatment of peritonitis. They stopped bleeding and purgatives and gave opium "to support the strength of the patient so as to gain time and diminish as far as possible the peristaltic action of the intestine." He appears to have been a great admirer of Laennec and crystallized the progress which seemed to have gone too far along one line. "The necessity," says Stokes, "for the close study of physical signs with the study of symptoms so as to illustrate their mutual bearing on diagnosis can remove that unjust opprobrium thrown on the advocates of auscultation that they neglect the study of symptoms."

He brings out a book on the treatment and diseases of the chest which was translated into German and said to be unequalled since the time

of Laennec. In the section on bronchitis he says "It includes the consideration of topics which are remote from the inflammatory affections of the bronchi such as dilatation and atrophy of their terminations.

He received many honours but refused a knighthood. Thomas Carlyle visited but did not impress him. He expressed this opinion of the great author "During my lifetime I have met many who were bores but Carlyle was hypoborean."

The fame of those days may have left the Dublin doctors but one instance which I have never forgotten suggests that the spirit is not dead. Sir Thomas Myles, a leading surgeon, had asked one of the students to examine the knee of a patient and tell him what was the matter with it. There was the usual fumbling followed by a vocal perplexity. Myles stopped him with, "Mr. Blank, let me remind you that precise knowledge puts an end to all conversation."



#### The Present is a Chameleon

Our whole life long it is the present and the present alone that we actually possess: the only difference is that at the beginning of life we look forward to a long future, and that towards the end we look back upon a long past; also that our temperament, but not our character, undergoes certain well-known changes, which make the present wear a different color at each period of life.—Arthur Schopenhauer.



#### Nothing Sacred

A main fact in the history of manners is the wonderful expressiveness of the human body. If it were made of glass, or of air, and the thoughts were written on steel tablets within, it could not publish more truly its meaning than now. Wise men read very sharply all your private history in your look and gait and behavior. The tell-tale body is all tongues.—Ralph Waldo Emerson.

## Editorial

**J. C. Hossack, M.D., C.M. (Man.), Editor**

### **Health and Ease For The Poor Patients**

It is the custom in St. Bartholomew's Hospital for the Hospitaller to pray, on certain solemn occasions, "for the health and ease of the poor patients." It is presumed that all human measures have already been applied and that it is only for those distresses beyond the aid of man that divine assistance is being invoked. We offer no such prayers here, not, at least, by an official at public functions, which is, perhaps, a pity; because, if we did, it might lead to a little soul-searching and to the question whether or not we had done all we could do ourselves.

We are not guilty of many sins of omission but hospitals are flagrantly guilty of certain sins of commission which rob the patient of his ease by unnecessarily disturbing his rest. The nocturnal ritual of taking temperatures cannot be too strongly condemned. In ninety-nine cases out of a hundred there is probably no excuse for it. But it is a rule. I asked a nurse one time why she had disturbed a patient whose temperature was normal. "But" she answered "it has to go on the chart." It has to go on the chart! Ye gods! Were charts made for patients or were patients made for charts? No. The taking of normal temperatures at dawn, or even before the sun itself is stirring, is a custom much more honored in the breach than the observance.

For those who, through the long night, have prayed that sleep might weigh their eyelids down, how distressing it is to be jolted awake only a moment after the prayer has been answered. Elsewhere you will find Dr. Moorehead's story about the drunken Irishman who, awakened in hospital, thought he was in heaven, and saw in the white-clad nurses "God's own holy angels." No such thought enters the mind of the rudely awakened patient.

We are advised in a proverb to let sleeping dogs lie lest harm come to us. It is unfortunate that roused patients cannot retaliate as can roused dogs—unfortunate that not the arouser but the aroused must suffer from this wanton injury. For it is both wanton and injurious; wanton because needless; injurious because it stimulates an emotional response which is highly undesirable and which tends to retard recovery.

There were no thermometers when the Hospitaller of St. Bartholomew's first offered this prayer. In these days when thermometers are so numerous and so frequently misused let us remember that health and ease are synonyms. One cannot take away ease without at the same time taking away health, or, at least, denying that extra modicum of health which the interrupted

ease would have given.

What is sleep? Sore labour's bath, balm of hurt minds, chief nourisher in life's feast! Why, then, drain the bath just filling, fling away the balm, and snatch the scarcely touched plate from the starving? The thermometer has its place, but that place is not the mouth of a drowsy patient who, after long wooing, has barely won the reluctant consent of nature's soft nurse. **Oh Lord, we beseech Thee, give health and ease to the poor patients.**

We can only read about the Tower of Babel but an idea of the noise that surrounded it we can hear in almost any hospital ward: voices high and deep, laughter loud and long, the machine-like clatter of many tongues, the raucous, harsh, shrill, groaning cacophonies that pour incessantly from loud speakers both human and mechanical—din hard enough to tolerate when one is well, intolerable when one is ill; proper enough in hotels and clubs but sorely out of place where men and women are striving to find rest, are fighting for their lives. **Oh Lord, we beseech Thee, give health and ease to the poor patients.**

And why must there be so much hospital visiting? Why do the lodge-brothers and lodge-sisters and the uncles and the cousins and the aunts—why do they visit in such numbers only when their friends are in hospital? And why must they come so often and stay so late? Patients well enough to enjoy large parties are well enough to go home. But to patients who are sick, much visiting by many visitors is hurtful, and most especially so when these are for others in the same room. Yet in almost every ward during visiting hours one will find a crowd of intruders sucking up the patients' oxygen and replacing it with their own halitosis and bromidrosis and tobacco smoke until they are finally driven forth by the stench of their own making. **Oh Lord, we beseech Thee, give health and ease to the poor patients.**

Everywhere throughout the land, throughout the world, new hospitals are rising. They are of the most modern design, are filled with the most modern equipment. Their offices are spacious, their laboratories magnificent, their post-mortem rooms palatial. But will they afford that quiet which means so much in bringing health and ease to the poor patients?

To be sure there is a place in hospitals for thermometers and radios and visitors. Visitors when few in number and of the right quality help convalescence. Quiet, pleasant, cheerful people are very welcome, for "the cheerful heart doeth good like a medicine." And no one will complain if

the radios be of the under pillow sort each delivering its quiet message to a solitary ear. Nor, indeed, might it be a bad idea to heed the poet's plea "And ever against eating cares, lap me in soft Lydian airs." Would it not be pleasant, when the bustle of the day is over, to hear such music whispering through the corridors, stealing into the porches of weary ears, sweetly numbing the brain like poppy or mandragora or other drowsy syrup, till it had seeped the senses in forgetfulness, and brought to every aching body and to every anxious mind a sleep, full of sweet dreams and health and quiet breathing? **Oh, Lord, we beseech**

**Thee, give health and ease to the poor patients.**

In the midst of what is very new and very good can not a place be found for the very old that is still the best of all—peace and quiet? Spacious offices please the well. But the sick have little interest in them or in the magnificence of the laboratories. Nor do their thoughts turn often to the palatial post-mortem rooms except, perhaps, to think of those who lie in them with a little envy "For there at least" they will say "there is no noise nor any nurse with a thermometer!" **Oh Lord, we beseech Thee, give health and ease to the poor patients.**

## Letter to the Editor

### The Etiology of Cancer

All the work and investigation done on the transmission of cancer; all the evidence brought to light by the use of carcinogenic and anti-carcinogenic substances, are pervaded with the idea that malignancy is fundamentally a disorder of metabolism, either stimulating or inhibiting cell growth. When carcinoma starts, the catabolic exceeds the anabolic rate. There are some predisposing, and many other factors starting the initial damage or destruction to normal cells; irradiation by X and ultra-violet rays, bacterial and virus infections, trauma, chemicals, including the polycyclic hydrocarbons, tar, soot, etc. It is most likely that specific damaging factors produce and liberate specific phospholipids from the damaged cells; e.g., ordinary trauma liberates thromboplastin (phospholipid), which is immediately fixed by the thrombin to the fibrin cycle. Syphilitic damage to cells liberates specific phospholipids which become fixed by antibodies, causing partial or total immunity (the basis of the Kahn test).

Other diseases show a similar response, e.g., tuberculosis and malaria.

The important factor about most phospholipids is that they are building-stones in the production of the tissue cells.

A recent departure in biochemistry (biological, or chemically competitive antagonism) in the metabolism of cells of foodstuffs, shows how easy it is for a cell or bacterium to absorb certain chemicals in error for the natural or normal nutrient. For example:

- Acetyl pyridium for nicotinic acid
- Sulfonamides for aminobenzoic acid
- Pyrithiamine for thiamine
- Gluco-ascorbic acid for ascorbic acid, etc.

From these examples, it is readily inferred that normal cells would easily assimilate phospholipids closely related to their own natural food phospholipids. The embryonic cells seem to be particularly vulnerable.

The evidences in favour of this hypothesis are many:

(1) When a cell is irradiated by X-rays the nucleus or nucleic acids causes mutation of phospho-compounds in the cell, e.g., nucleic acids and nuclear compounds, which become utilized as foodstuffs for adjacent cells.

(2) Phosphorus is one of the easily irradiated elements, hence the ready mutation of phospho-compounds.

(3) Phospholipids are readily assimilated by neoplasms.

(4) There is a greater percentage of phosphorus in cancerous tissue than in normal tissue.

(5) The phospholipids are carried by cholesterol; feeding of cholesterol stimulates the growth of cancer.

(6) Cancer mainly travels by the lymphatics where there is greater concentrations of phospholipids and cholesterol.

(7) The "milk factor" in the reproduction of cancer is a heavy molecule, probably a phospholipid.

(8) In leukaemia and polycythaemia vera, phospholipids are readily taken up from the haemopoietic system, or blood stream. The action of urethane in control of leukaemia is probably due to the changing or destruction of the specific phospholipid used by the abnormal white cells.

(9) In the hydatidiform mole, the tumor may remain innocent in the uterine wall, but on damage to the mucous membrane, and liberation of new phospholipids, it becomes a chorionepithelioma.

(10) The action of aminopterin on the leucemias is, undoubtedly, an intermediate factor (phospholipid in the liver?). The giving of hormone is, apparently, not a primary factor in etiology but simply stimulates, or inhibits, cell growth.

All this information relating to the transition of the normal to the malignant cell, points definitely to the possibility that cancer is a metabolic disorder.

An attempt at proving this hypothesis could possibly be accomplished by computing malignant cell growth in normal medium, against the lymph from the thoracic duct in individuals who have died of cancer, and this might have to be lymph from specific types of carcinoma.

Our knowledge of biochemistry of phospholipids will be greatly stimulated by research along these lines, and would bring all research work into one channel, namely, the metabolism of phospholipids and their relation to normal and malignant cell growth.

Geo. C. Dodds.

## Article

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### The Coroner: His Place in the Community

Dr. A. Gordon

*"Is she to be buried in Christian burial that wil'ully  
seeks her own salvation?"*

*"I tell thee she is . . . and therefore make her grave  
straight. The crowner hath sat on her, and calls it  
Christian burial."*

*Hamlet, Act V, Scene I.*

When William Shakespeare was writing these words in 1601 the office of Coroner was already some 400 years old, and his place in the community well established. The words of the grave diggers told the Elizabethan audience in no uncertain terms, what they already knew full well, with a shiver at the very roots of their hearts. The suicide, so pronounced by the coroner's jury, was to be buried in a crooked grave . . . at a crossroads . . . with a stake driven through his heart, so that the world might stamp over the evil spirit . . . pegged within the body by the stake: and should the stake not hold, the crossing roads forming a sacred symbol would securely hold it there.

In the eighth century King Alfred is said to have put a judge to death for sentencing a man to death on the coroner's record alone. The Bench was no sinecure in Alfred's day. He put fourteen other judges to death as well.

The name "Coroner" came from his first title: "Custodes Placitorum Coronae" . . . custodian of the pleas of the Crown, and one of the privileges accorded to the citizens of London by Henry the First, was that of electing their own coroner.

His office was a source of revenue to the Royal coffers: the bull that gored a man to death was, on the coroner's warrant, forfeited to the Crown as a deodand: but after the signing of Magna Carta, he (the coroner, not the bull) ceased to be so remunerative. From that time on, the Coroner's Court became a Court of Record . . . that is (to quote from the famous Blackstone) "A Court whereof the acts and judicial proceedings are enrolled for perpetual memory and testimony . . . which rolls are called the Rolls of the Court . . . and are of such high and supereminent authority, that their truth is not to be called in question . . . for it is a settled rule and maxim that nothing shall be averred against a record, nor shall any plea or proof be admitted to the contrary."

Today his duties are somewhat curtailed. He no longer enquires into the coming ashore of Royal Fish, whales or sturgeon . . . nor into the origin of fires (except in London where he still does so) . . . nor into the matter of Treasure Trove . . . nor into estates over the value of \$300.00.

The Lord Chief Justice of England is the Supreme Coroner of England; and Judges of the High Court of Justice are also coroners by virtue of their office. There are also Country and Borough coroners, and coroners by appointment, the Canadian coroners are such.

In England there exists a very special coroner called the "Coroner of the Verge." His jurisdiction extends over a ten-mile radius round the person of the Sovereign wherever he may be. In ancient days this doubtless ensured a most discreet handling of certain incidents arising among the royal entourage, which otherwise might have resulted in more than a breath of scandal.

That eminent authority Lord Coke gave the following qualifications as necessary to the holder of the office of Coroner:

Honesty.

Of sufficient legal knowledge and understanding.

Of good ability and power to execute his office according to his knowledge.

Of diligence in attendance for the due execution of his office.

And these for three reasons:

The Law presumes he will do his duty and not offend the Law for fear of punishment whereunto his lands and goods are subject . . . (an ironic touch in my own case).

That he will be able to answer the King all such fines as belong to him, and to discharge the county thereof.

That he may execute his office without bribery. (Gentlemen, I blush).

The Coroner's court is essentially a Criminal Court, dealing to a limited extent with cases where the Criminal Code may possibly have been infringed.

So much for the background, a magnificent British background; and the spirit of this high tradition lifts the British and Canadian coroner far above the reach of the shower of strictures levelled by the American Press at an office which in its country has descended, in some cases to the

level of a mere political plum, and that a trifle over ripe. The United States is, however, already on the road to a splendid rectification with its appointments in some states of highly qualified Medical Examiners.

When death finally triumphs, and the medical battle is lost, the Law must be satisfied beyond a peradventure, if at all possible upon the following points:

WHO was the deceased . . . HOW . . . WHERE . . . WHEN . . . and BY WHAT MEANS DID HE MEET ITS DEATH? To discover these facts is the duty of the Coroner, his court and jury.

The Coroner is a judge in his own court with full judicial power . . . and the term "Crowner" is still used in England by the illiterate, those unwitting preservers of many an ancient tradition . . . from the medieval days when the coroner was "Custodes Placitorum Coronae."

When a medical man becomes a coroner he must become a sort of mental chameleon; and his viewpoint must undergo a sudden and radical change. Whenever he assumes his new role he is not for the moment concerned with the saving of life. He must now marshal his knowledge of medicine and the allied sciences, and bring it to bear upon the legal proof and unravelling of crime, or the no less important establishment of innocence or the absence of crime . . . For instance:

In a squalid room in a downtown block I found the body of a poor woman lying dead on her left side near the door so that entry was effected with difficulty. Post mortem lividity which as you know follows the law of gravitation and appears at points free from pressure, was in this case very apparent all along the right side . . . mute witness to the fact that the body had been moved since death . . . who had moved it? . . . Why? . . . Whence? I set the police enquiry afoot, and the answer came from the janitor: "I guess I moved her alright, 'cause when I pushed the door open she sort of rolled over like she is now" . . . so you see, gentlemen, the common explanation is often the most adequate. This mystery was thus quickly solved.

The dead body of an infant is to the doctor a corpse; but to the medical jurist it is a human sphinx . . . full of riddles: Mature or immature . . . Born alive or born dead . . . Was the child killed? . . . If so, how? . . . Was death natural? . . . If so, why? . . . and upon the answers may hang the life of a fellow man or woman, or the honour of a sister . . . thus the coroner must be a minute observer . . . and somewhat of a lover of Sherlock Holmes: but the longer he follows the trail the larger will be his book of unanswered riddles. Quite frequently the answer comes when least expected:

At 11 o'clock on a cold April morning with a sharp North wind blowing I was called to a foot-

path on the bank of the Red River, at the foot of St. John's Park. The police were in charge and had just cut down the body of a man, found hanging from a small tree inclined at a 20 degree angle to a 45 degree bank. He had been suspended by a cord made of 4-ply bindertwine. The bark of the limb showed fresh chafing, exposing the cambium layer. The remains of the cord were still on the limb; and in one of the strands was a little piece of bright red flannel closely interwoven. A deep ligature mark was present on the neck, tented under the occiput and presenting the classical distal marginal congestion. The rest of the body was cooling but it was of interest that the ligature mark was appreciably warmer to the touch . . . The deceased had been seen 20 minutes before discovery going through the park. He had spoken to the attendant . . . He was followed by his wife a few minutes later. She told the attendant that she feared for her husband.

Such was the case . . . a simple one of suicide by hanging . . . but there was a sequel. About a week later the wife came to my office, with an insurance death claim in her hand. She was angry at my presumption of suicide.

"How do you know he wasn't murdered?" she asked . . . I gave my reasons, and in reconstructing the scene I said: "There was a mystery, however," and told her of the red flannel fragment. She suddenly blurted out "Ah, that's the cord I roped my boxes with when we moved from Saskatchewan" . . . out of her mouth came the admission that the cord was obtained in her own home. She left the office madder than ever at her inadvertent contribution to the suicide aspect of the case. She didn't get the insurance . . . I was glad I hadn't missed the bit of red flannel.

The coroner finds himself functionally related to the Criminal Investigation laboratory experts, to the Pathologists, to the Crown, to the Police and to the Public.

Under the present system all technical forensic investigation is done under the R.C.M.P. at Regina. Excellent though that laboratory is, the time is long overdue for Manitoba to stand upon its own feet in this matter. The modern concept of criminal investigation requires a sharp increase in toxicological investigation. Manitoba is growing and already, with investigation pared to the minimum, it is a common experience to await the return of toxicological reports for three weeks or more. The effect of impediment of police procedures is at once obvious; and in a given case might well prove disastrous.

The relations of the coroner with the pathologists is in our case particularly happy. The coroner supplies the pathologist with all details surrounding the case under investigation; and the mutual exchange of information makes it possible for the coroner's office to be of material benefit to the

Crown investigation. When, however, the prism of academic uncertainty breaks up the clear white light of Olympian pathological opinion into the rainbow of doubt and conjecture. The coroner leans across the autopsy table and says: "All the world's mad, lad but me and thee . . . and sometimes I think thee's a little queer." It is then the coroner's duty to view the problem in the polarized light of his own Reason.

The Crown, in the person of the Attorney-General's Department, is represented at the Coroner's inquest as of right; and offers highly valuable legal guidance when necessary during the inquest. It has been made quite clear to this coroner, however, that many questions by the Crown is somewhat of a reflection on the coroner's ability. When all is going well in the inquest the Crown follows a policy of graceful Gilbertian deferment. Counsel for interested parties may ask questions only at the discretion of the coroner. This discretion is very freely given, and only withdrawn when an over zealous counsel attempts to build up a case for his clients. The place for that is in the higher court.

"The policeman's lot is not a happy one" says the G. and S. lyric; but an understanding coroner can greatly mitigate it, by prompt attendance at the scene, by expert assessment of the problem under investigation, by demonstration of classical signs and establishment of their relative importance, and by interpretation of the pathological evidence in layman's terms. He must also interpret the police function to the relatives and friends of the deceased. This last is quickly said but implies much more. My experience has shown me beyond a doubt that from its chief executive to its newest recruit you and I have cause to be proud of our police department . . . and this in spite of the parking ticket of last Wednesday.

The coroner's first relationship with the public is usually in the private home where death has struck suddenly, or in the factory, or in the rooming house, at the roadside, on the riverbank. In these trying situations although he is present in the capacity of investigator he finds many grand opportunities to exercise his humanitarian instincts . . . to dispel fear . . . to comfort a stricken heart . . . to guide a confused mind . . . and not infrequently to shield his medical colleagues from the barbed darts of criticism born of grief and ignorance. But there are pitfalls here too: One of us, who shall be nameless, going into a house, became absorbed in the investigation, till from the son of the deceased came the solemn admonition: "I think you might at least take off your hat in the presence of the dead." . . . That coroner's face was as though a perle of amyl nitrate had been broken beneath his nose . . . that hat came off and a profound apology came with it. A few

days later that coroner went to the Jewish funeral parlor to open an inquest. The hat came reverently off but a firm voice said, "Never mind that Doc you don't have to do that here." So you see, gentlemen, sometimes the coroner just can't win.

At the inquest the coroner is in close contact with the public in its roles of juryman and witness: and if, as he should be, he is an interested student of human nature he will find much to learn, much to impart, and much to set him wondering.

That seven men picked almost entirely at random will be of widely varying mental ability is beyond argument: but that these seven will almost invariably bring in a correct finding in a given case if properly presented is a matter of considerable interest, and suggests that true justice is after all as simple as truth itself. The coroner's jury, however, must ever be reminded that its function is one of fact finding, and that no one is on trial in the coroner's court; yet in a case where the coroner was closely questioning a husband whose wife was found dead from starvation, in a room with all the windows boarded up and lighted by only one red electric bulb, a juryman rose during the questioning and said: "I wish to say a few words in defence of Mr. Smith." He was immediately but gently shown that no defence was necessary.

The jury's recommendations very frequently result in the installation of factory safeguards, and many a level railway crossing signal is a visible evidence of the practical suggestion of the coroner's jury. You may be saved by one of these tomorrow night.

Lord Darling, that great and caustic ornament of the British judiciary, divided witnesses into two classes, professional and accidental. Both of these frequently appear in the coroner's court and I already find the true expert is simple in his presentation while the pseudo-expert is nebulous and irritable.

The accidental witness presents an interesting picture in psychological behaviour. He may show reluctance born of a deep dislike of publicity or notoriety, or even of sympathy. He would often rather let an injustice be done than undergo an appearance in the box.

He may show eagerness born of a love of the same publicity shunned and abhorred by his brother. He may be motivated by a subconscious desire to be an authority and the man of the moment. When dismissed with but a few questions he retires with a smile of triumph on his face which only leaves when he realizes that his evidence was not deemed worthy of more consideration.

He may, however, be equally impelled by a sense of being on the side of justice, or of being opposed to all organized forms of police and legal control. On the other hand he may be filled with a sense of friendship or partisanship.

When these psychological factors operate in minds of varying degrees of intelligence and education it is not at all impossible that a formidable melange of truth, emphasis, confusion, uncertainty, misrepresentation, together with a slight dash of perjury, may be injected into the evidence. All the emotional strings of the human harp are sounded; and the ensuing symphony is often hard to analyze. This is the coroner's duty and much depends on his skill in assessment of such evidence, which may be good, bad, or indifferent, coming as it does from competent, terrified, biased or stupid witnesses.

Checking the verbal flow of the garrulous witness is like trying to stem a Highland stream in spate; and I assure you that hell hath no fury like a woman so checked.

The grief-stricken witness must, of course, be handled with the utmost sympathy and consideration, while the earnest witness often produces a mass of trivial chaff which must be carefully winnowed for the grain of corn.

The impertinent witness soon lays himself open to the classical Gilbertian "Short, sharp shock," and he invariably gets it.

The child witness giving its evidence in a tense atmosphere of adult sympathy, often gives a sample of the purest truth and earns the love and respect of all who hear him. . . . You will all remember the murder of the so-called "Pussycat Woman." In that case two little boys who knew her well discovered the body. In the witness box one of them described the event as follows: "It was a cold, rainy night and we were sent to get the wood. The door was open as we went past and we saw a woman . . . (Mark that note of accuracy . . . Remember they knew her) with her hair all down over her face."

Counsel: "And what did you do next?"

Answer: "We went on and got the wood . . . but we came back . . . (what boy wouldn't?) and we hung around."

Counsel: "And what happened next?"

Answer: "And then a 'flatfoot' came."

You should have heard the shuffling of the legal feet in the court room . . . the face of the law . . . and there was a lot of it . . . was very red indeed.

In our community life the development of machines, speed, and the use of materials in industry and commerce, takes a lamentable toll of human life, that basic essential if the community is to continue. Death, the great disrupter of the even tenor of our way, is still to us a mighty mystery shrouded in grief, pain, fear, superstition and biochemistry. It is a grim challenge demanding an answer and prevention in that futile struggle for immortality by us who have not observed that man is already immortal, in his children. To me it is a stimulating thought that the coroner,

his court and jury represent the commencement of that inquiry. That court free from many of the trammels of legal protocol represents the voice of a free people asking the questions How, Where, When and by What Means, this death occurred. The coroner's jury has power to inculpate, to exonerate, and to make recommendations for the prevention of catastrophe.

Let no facile legal planner's hand be laid against this great and basic prerogative of the people. After the foreman of the coroner's jury stands and reads the verdict the coroner reads it in open court. He may agree or disagree with it . . . but he cannot change it. That verdict takes its place in the record for as long as a record shall last.

Quaint verdicts do occur: and I shall always remember the one which closed with the words "We the jury wish to extend our deepest sympathy to the deceased."

"The coroner's relations with the medical profession are rather varied. He sees the doctor as the attending physician, at home, in the hospital, and in the witness box—and sometimes he sees him as a factor in medical disasters when through accident, through ignorance, or through both the unfortunate man comes under the spotlight of investigation. In these situations the coroner by interpreting the necessarily technical evidence in terms comprehensible to the jury enables that jury to assess the situation with minds unconfused, and freed from much preconceived bias based upon erroneous conceptions.

When through accident, sympathy, cupidity, or a grossly distorted sense of relative values, a doctor finds himself involved in cases of abortion or narcotic administration he stands in dire need of an understanding and intelligent mind on the bench at the coroner's inquest. As the public watches the progress of the investigation the whole profession stands in need of protection from the results of misapplied emphasis and unclarified implication.

Out of this last comes the realization that the medical witness should be well trained both in forensic medicine in general, and in inquest procedure in particular. This will never be, so long as forensic medicine receives the minimal consideration which it does in our university at present, where most of the lectures are given by a member of the legal profession. I would earnestly request that the Faculty of Medicine and the University of Manitoba take the necessary steps to establish a chair of forensic medicine. Internes properly trained would become an increasingly protective factor in the management of hospitals; and when released into practice would be made unforgettable aware of the pitfalls which await them. An increased knowledge of the relation of pathology to the forensic science would make them

a credit to the Alma Mater when giving evidence in the light of the cruelly critical public eye. Should they become coroners, as many of them will, the value of such training is indeed very obvious. Let me but a little show the need: I have seen an interne lounging in the witness box chewing placidly on a wad of gum. I have heard an interne having pronounced death, unable to state the time even as morning or afternoon.

I have heard an interne report a sudden coronary death to the coroner without mentioning the rather important fact that the deceased had fallen out of bed and was so found. In this case the hospital stands in danger of legal action when the tears of the relatives have ceased to flow, and the aspect of neglect becomes exaggerated by neighbor busybodies.

A forensic section of this body would not be amiss. Here the discussion of timely and important medico-legal problems by experts of the two professions would be of great value to the profession at large, and would in some measure serve to bridge the gap left in its training by the relegation of forensic medicine to a relatively nebulous and superficial consideration.

The coroner interested in scientific anomalies and peculiarities is occasionally rewarded quite unexpectedly by the sight of a heart presenting a congenital absence of the right coronary artery and a compensatory hypertrophy of the left one. This heart had survived the stress of life till the age of forty-seven.

In another case a man collapsing on the bowling green presented a bilateral coronary embolus.

Instantaneous cadaveric rigidity is a phenomenon very rarely seen, and not yet satisfactorily explained. Some time ago there was a drug robbery at Liggett's Drug Store where morphine, atropine and hyoscine were taken. The sequel followed almost immediately. Within a week there occurred four sudden deaths among known drug addicts. One of these I found totally unsupported, in the classical knee chest position, with rigor mortis established from head to feet. The body was on the floor midway between the bed and the wash basin, spoon in hand and the usual drug injection apparatus, consisting of eye dropper with taped tip and a fine hypo needle, lying beside it. Fresh needle puncture of the median basilic vein was present. The mystery remains unsolved, for the toxicological report from the R.C.M.P. laboratory at Regina was entirely negative, for all four of these sudden deaths. A hypothesis of microscopic multiple air emboli is still under consideration.

Strange deaths continue to occur, intriguing the imagination; and provoking a flow of much wisdom after the event. . . . One gusty summer afternoon I was called to Mile 4 just out of Winnipeg on the main line of the C.N.R. I found a

section gang with its little yellow motor-speeder and flat trailer pulled off to the side of the ballast. Lying between the east and west-bound lines was the body of a young strong-looking workman, just recently dead. There were no marks of violence . . . no history of a quarrel . . . no history of illness. The gang had arrived on the speeder just after lunch and were starting to work at changing some ties.

The foreman spoke to the lad, turned his back for a moment and on turning again found him lying on the ballast, dead. He had neither spoken, cried out, nor coughed. The post mortem was entirely negative until the last two minutes, when examination of the larynx disclosed a small spindle shaped wad of gum firmly fixed between the vocal cords allowing free airway on either side . . . cause of death . . . sudden cardiac arrest due to reflex vagal inhibition.

At 4.30 p.m. on a bitterly cold day last January, I arrived at a tenement on Lily St., and climbing a noisome and crazy stair by the light of a police torch I came into a dismal room, almost completely filled by a bed, a bureau and 2 chairs. In the dim light of a small carbon bulb, a picture of indescribable squalor was revealed. The temperature of the room was 50 degrees. In an 18-inch space between foot of bed and wall lay the body of a man half on its left side on the floor. A pillow under the head was almost saturated with blood . . . not yet dry, but wet and clotting. The face was cyanosed, and there was fresh blood at the nostrils . . . the body was cooling. Rigor mortis was present to the ankles. Post mortem lividity conformed to the position when found. Rectal temperature was 86 deg. at 5.15 p.m. From these data one fixed the time of death at about 9 a.m. of this day (8.5 hours before).

The body was fully clothed and wore heavy shoe packs. There was a ticket to Port Arthur in the pocket together with a discharge slip from Deer Lodge Hospital showing an investigation for peptic ulcer.

Deceased was known to the tenant of this room, who stated that the man had come at 11 p.m. the previous night, saying "I'm all in." The tenant had thrown him a pillow saying: "Bunk down there at the foot of the bed." When morning came he had gone out leaving the visitor to "sleep it off."

Post mortem showed asphyxial petechiae in classical "collar" formation at base of the neck on the chest. There was a heavy odor of beer on opening the body. Lungs congested with patches of emphysema . . . Bronchi filled with glairy tenacious mucoid material . . . Heart normal . . . Upper Respiratory tract clear of mechanical obstruction . . . some mucus present. Trachea . . . deeply congested . . . livid and containing glairy

bloody mucus . . . Bronchi occluded with glairy mucus . . . Stomach showed no trace of ulcer . . . Other organs normal.

Reconstruction of this dismal tale gives a picture of partial prolonged asphyxia while drunk. Epistaxis supervening completed the asphyxia as the pillow became saturated.

Inscrutable indeed are the ways of providence. Post mortem on a sudden death showed advanced Bright's disease, profound anaemia and terminal broncho-pneumonia. There was also evidence of marked avitaminosis. The erstwhile physician reporting on this case told me that the patient had

left his supervision to become a Christian Scientist after a gastrectomy by Dr. Thorlakson.

In my series of cases to date I must regrettably report a mortality of only 98.6% . . . due to the unexpected recovery of one case of carbon monoxide poisoning.

If, however, I have succeeded in demonstrating the coroner's office as an integral part of the great legal machine set up by the people for the purpose of the preservation of good, the punishment of evil, and the protection of the citizen in the state, I have achieved my original purpose.

## Book Reviews

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### Stress

The important theories advanced by Dr. Hans Salye have evoked so much interest the world over that a vast amount of literature has already accumulated. For the special as well as for the general reader covering this literature is a tremendous task which threatens each year to become more tremendous.

In order to lighten this burden there is to be published each year an "Annual Report on Stress." In order that the scope, arrangement and purpose of this Annual Report may be given clearly, the authors' own words are here quoted in extenso.

The volume, it should be understood, supplements but does not replace the original work.

"The scope of the Annual Reports." This book is not meant to act as an abstract journal, but as a treatise. As such, it has to fulfil the dual task of a guide to the entire literature on stress and of a critical correlator of pertinent facts.

As I am dictating these lines my eyes happen to fall upon three reviews on the General-Adaptation-Syndrome, which I keep on the shelf above my desk. They are dated 1937, 1946 and 1950 respectively, and I note with amusement that in the first of these I was able to quote only 30, in the second, 698 and in the third, more than 5,500 references, on what appeared to be pertinent subjects at these times. The present report, which is meant to act as the first annual supplement to "Stress," had to deal with about 3,000 references, almost all of which were published during the past academic year!

How to use these Annual Reports. These books are not meant to be read from cover to cover. A few remarks about their structure will help to point out how I think they should be used.

In order to include the entire annual literature on stress in a single volume, it became necessary to evolve a somewhat unusual form of presentation. I hope that this style will facilitate a clear, succinct description of the complex data, but it will

certainly not make for interesting reading, except possibly for experts perusing the subject matter in their particular fields.

In view of the large number of topics that had to be considered, it was not possible to preface each section only in the case of a few, very complex, or very new subjects. My main endeavor has been to make the report highly informative even when necessity dictated, at the expense of being dry. As far as possible, the material is described in brief, simple sentences. Usually, each one of these (and often even several parts of the sentence) bears an inconspicuous, small superscript number, which does not interfere with readability and readily leads to the pertinent publications upon which the statement is based.

To facilitate orientation, the general structure of presentation is constantly emphasized by the running heads, on each page, and by the many sub-titles, printed in type indicative of their relative importance. Throughout the text, block letters and italics are used exclusively to denote the subdivision of the subject matter and not to indicate importance.

The future readers of this book will presumably have widely different questions to ask. Hence, as I have said, only very few of them will find it rewarding to read the entire material in the order in which it is presented. Every effort has been made, therefore, to expedite the task of finding specific information concerning any one problem without having to wade through lengthy discussions on unrelated topics. To accomplish this, all the material is presented in close adherence to the general structure outlined in the table of contents and the book has been supplemented by a very detailed subject index.

Those who wish to study broad subjects, dealt with in special sections, will find it convenient, first to consult the table of contents. From the latter it will be evident that the entire volume is subdivided into two main sections as follows:

A. The general physiology and pathology of stress, which includes: a synopsis of the stress-concept as it presents itself in 1951, a discussion of the principal objections against the stress-concept, a section on definitions and terminology, as well as a brief characterization of the "stressor agents" and of the "adaptive hormones."

B. The special physiology and pathology of stress, in which data concerning the action of stress upon the various "targets" are systematically presented. Not only individual organs (e.g., kidney, liver), but even metabolic changes (e.g., glycogen, hyaluronidase content of tissues) and certain functional responses, not readily characterized by morphologic or chemical alterations (e.g., resistance to damage, inflammation), have been considered as "targets" for the structural organization of our material.

In relation to each target (e.g., the blood-vessels) the relevant data are listed under the following headings:

(1) Effects of non-specific stressors (e.g., effect of trauma upon vessels).

(2) Effects upon the responsiveness of the target to stressors, of specific stimuli influencing the G-A-S. Among these are the "adaptive hormones," nervous responses, and other endogenous factors which participate in adaptive reactions (e.g., effect of corticoids upon vessels).

(3) "Diseases of Adaptation," which affect this target organ in particular (e.g., periarteritis nodosa).

(4) Theories concerning the interpretation of the above-mentioned data (e.g., mechanism through which trauma or corticoids may affect vessels).

(5) Wherever the relevant literature is particularly complex or contradictory a brief summary is appended, in order to give most prominence to what I consider to be the best established and most important part of the preceding section.

In order to simplify orientation, as far as possible, all the "stressors" and all the "stimuli" are always discussed in the same order.

The subject index will prove particularly useful to those who do not have the time to study the general structure of the volume carefully. It will also help whenever it is desirable to investigate thoroughly and completely those subjects to which no special section has been assigned. For instance, a reader interested in all the information concerning STH (including its chemistry and pharmacology, its effect on various organs and metabolic processes, its influence upon resistance to infection, as well as the theories proposed for the evaluation of pertinent data), will save time by merely turning to the STH entries in the index, because there is no special chapter on STH. The rather self-explanatory symbols which have been employed, and explained in a brief passage which prefaces the index.

Attention is called to the fact that this technique of presentation conforms in every respect to that used in "Stress." It is planned to arrange the material in all future "Annual Reports on Stress" in the same manner. Hence, a reader interested in data concerning any target will merely have to look up the corresponding sections, first in "Stress," and then in the "Annual Reports on Stress" for each intervening year.

### Summary

(1) If you are in great haste, consult this book only through the subject index for specific data, or look up the section "References" for individual papers.

(2) If you have some time, first, read "The general physiology and pathology of stress" and then only the special chapters concerning your field of interest.

(3) If the study of stress, as such, is your principal field of interest, first read this volume from cover to cover for up-to-date orientation, and then consult individual chapters whenever special problems arise.

**Annual Report on Stress**, by Hans Selye, M.D., Ph.D. (Prague); D.Sc. (McGill), F.R.S. (Canada), Professor and Director of the Institut de Medecine et de Chirurgie experimentales Universite de Montreal. ACTA, Inc., Medical Publishers, Montreal, 644 + 22 pages. Price \$10.00. Purchasers are advised to obtain the volume direct from the publishers.

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## Diseases of the Nervous System

W. Russel Brain

Ignorance of neurological disorders is neither so common nor so great as it used to be, although the nervous system is still the most difficult one for general comprehension. Moreover it is less easy for the practitioner to keep abreast of neurological advances.

Therefore, not only undergraduates but graduates also have need for an authoritative and modern source of information. And, further, for both student and practitioner, the most desirable text is one that is large enough to be comprehensive, small enough to be concise, written with such clarity as to be readily understood, and with a sufficient number of illustrations to make important points clear. Russel Brain's book satisfies all these requirements. Now in its fourth edition it is probably the best book of its class.

In no other system is a knowledge of anatomy and physiology so necessary for the proper understanding of symptoms. Brain intersperses these basic data throughout his book. The first section is devoted to "Disorders of Function in the light of Anatomy and Physiology." Here symptoms and

signs are considered as examples of abnormal function of structures whose normal actions are discussed at the same time. This leads one to think in terms of function rather than to rely on memory of syndromes. This plan is applied to all parts of the nervous system and furnishes a much more useful approach to nervous disease than would separate chapters on anatomy and physiology as such.

Other divisions of the book deal with neoplasms, vascular disorders, injuries, infections, congenital disorders and intoxications, degenerations. Each division is subdivided into chapters in which are considered all the usual, most of the unusual and some of the rare, manifestations of

nervous disorders. There are chapters also on disorders of the peripheral nerves, of the muscles, of the autonomic nervous system, of the bones of the skull, etc. The psychological aspects of neurology are also given space.

The logical arrangement and clear expression present throughout the whole work makes reading easy and aids comprehension; and its completeness makes it a useful book for reference.

**Diseases of the Nervous System**, by W. Russel Brain, D.M. (exon.) P.R.C.P. (London), Physician to the London Hospital and to the Maida Vale Hospital for Nervous Diseases, etc. Fourth Edition, 1002 pages, illustrated, Oxford Medical Publications: Toronto, 1951. Price \$7.50.

#### Prosthetists and Orthotists Service

A clearinghouse service on competent, ethical technicians specializing in braces, limbs, plastic eyes, or facial and body prostheses is being established. Qualified dentists doing obturator work or plastic eyes are included. Information will be available to all members of the medical profession on request.

Please assist this NEW service by forwarding names and addresses of qualified technicians and dentists to Academy-International of Medicine, 214 West Sixth St., Topeka, Kansas.



#### The Eighth Annual Meeting of the American College of Allergists

The next annual meeting of the American College of Allergists will be held this year at the William Penn Hotel in Pittsburgh, Pennsylvania, on April 7, 8, 9. The College is offering an unusually practical programme for its fellows, members and guests.

In addition to 20 addresses on general topics and special scientific investigations, there will be round tables at luncheons and sectional meetings devoted exclusively to the psychosomatic aspects of the allergic patient, allergy in infants and children, allergic manifestations in the skin, as well as those seen in the eye, ear, nose and throat.

An innovation for meetings of allergists will be a session devoted to the problems of the allergic patient as met in modern industrial medicine. All reputable physicians are welcome to attend. For more particulars, write the College, LaSalle Medical Building, Minneapolis 2, Minnesota.



#### Frantol Methylsulfate

Manufacturer — Schering Corporation Limited, Montreal.

Active Constituent — Diphenmethanil methylsulfate (N, N-dimethyl-4-piperidylidene-1, 1-diphenylmethane methylsulfate).

Action—Anticholinergic agent.

Advantages—because of its selectivity of action, side effects such as mydriasis, dryness of mouth, urinary retention, and constipation are rarely produced.

Indications—Peptic ulcer and other conditions where it is desirable to reduce gastric acidity and motility of the stomach. Also effectively curtails hyperhidrosis.

Dosage—One 100 mg. tablet four times daily. Continue four to six weeks. In some cases it may be advisable to modify the dosage depending upon severity or for maintenance of the case.

Packaging—100 mg. tablets, scored, bottles of 100.



#### Ciba Assists Research Department

Commencing this year Ciba and Company Limited have initiated an annual grant of seventy five dollars to the Department of Physiology and Medical Research to assist in the purchase of scientific journals.

As the Departmental Library is a branch of the Main Library these journals will be available to all members of the profession. This gift will materially relieve the burden on the members of the Department who previously have personally purchased these publications.

## Association Page

 Reported by M. T. Macfarland, M.D.

### **Workmen's Compensation Board**

Correspondence between the Association and the Workmen's Compensation Board since the commencement of negotiations in 1951 is as follows:

**McNulty to Cousley, February 24th, 1951:**

The writer has been appointed chairman of the Workmen's Compensation Board Negotiating Committee for the Manitoba Medical Association. I feel that you and I should meet together for a brief discussion, before there is a request for a general meeting of your Board and the M.M.A. committee. Therefore, I am asking for an appointment with you at your earliest convenience.

**Cousley to McNulty, March 2, 1951:**

I am in receipt of your letter of the 24th ult. and would be glad to see you at any time which is convenient to you. I would suggest that you telephone me suggesting a time that will be convenient to you and I am sure it will be possible for me to have a free period on the date suggested.

**Macfarland to McNulty, March 8th, 1951:**

Enclosed, for your information, is copy of the brief prepared for submission to Workmen's Compensation Board—Dept. of Labour hearing.

**Mr. Chairman and Members of the Committee:**

This presentation is made on behalf of the Manitoba Medical Association and associated services and more particularly on behalf of the members of the medical profession who are engaged in the treatment of patients who come within the purview of the provisions of The Workmen's Compensation Act.

#### **Background**

Prior to the enactment of The Workmen's Compensation Act no systematic attempt to provide compensation for those injured through industrial accidents was in existence. The workman was in nearly every instance forced to look to the courts for redress, and his right thereto was dependent on his ability to prove negligence on the part of his employer, and he still had to face the obstacles of "common employment," "contributory negligence" and "assumption of risk" doctrines. Litigation was costly and long drawn out. On the other hand the liability of the employer was unlimited and he was individually responsible for any judgment which might be rendered against him. It was true that he might insure against that liability, but that was no assurance to the workman that he would receive anything by way of damages as the insurance company only undertook to relieve the employer of his legal liability.

With the introduction of workmen's compensation legislation the right of the injured workman to sue his employer was taken away and substituted for it was a definite scheme of compensation as provided by the Act. In relation to most of the industries to which it applies the Act is a compulsory and exclusive collective liability or mutual insurance system administered by a government appointed Board and financed by employers. Its effect has been far reaching. It has provided a

foundation for other social advances on the principle of not letting burdens rest where they originally fall, namely, upon the individual, but spreading them over society as a whole. In the last analysis, however, the cost rests upon the consumer; the employer, who is assessed on the basis of his pay roll, adds his cost of compensation to the cost of production and hence passes it on in the selling price to the consumer.

There is no appeal from the decisions of the Board and no proceeding before the Board may be stopped, or restrained by injunction, prohibition or other process or proceeding in any court. The Board has the exclusive power to examine into, hear and determine all matters in respect of which any power, authority or discretion is conferred upon the Board. The action or decision of the Board is final and conclusive.

The Board is trustee of employers' funds and the guardian of workmen's rights. It pays no taxes and makes no profits. It has no creditors. It costs the Province comparatively little. Incidental to its main objective the Board is also concerned with getting the injured workman back to work and to assist him in lessening or removing any handicap resulting from his injuries.

#### **Status of Medical Profession**

In addition to the employer-employee groups there is a third group which is directly affected by the operation of the Act, and that is the medical profession. Each claim for compensation is based upon injuries received in an industrial accident or the contraction of an industrial disease. Medical treatment and advice is an essential in either instance. Consequently, the Board must look to members of the profession to provide the service required, the expense of which is borne by the Board. Medical aid is a service which the Board obtains on the same basis as any other service or commodity except that the rendering of medical aid is subject to restrictive conditions imposed by the Board which are not imposed on other types of services or in the furnishing of commodities. The rigid enforcement of the rules by non-medical personnel is a source of irritation. The latitude and flexibility required for efficient medical treatment is incompatible with the exacting demands of the Board and its administrative staff. The Association recognizes the Board as a trustee of public moneys must see that they are properly expended on the objects of the trust but submits that neither the employer group nor the employee group would suffer by the introduction of a greater degree of flexibility in its treatment of the profession. The profession feels that any infringement by the Board even indirectly into the field of medicine and surgery for which its members are specially trained and equipped interferes with the proper discharge by the physician of his duties.

It is a matter of regret to the Association that the profession's relations with the Board have not been happier. It is, however, a reasonable assumption that the differences can be ironed out if the root causes of its persistent recurrence can be found and corrected.

The profession feels that a too large portion of the blame for the present situation has been attributed to it but admits that it has rather pas-

sively accepted such blame. As a principal source of trouble attention has been focussed on the schedule of fees almost to the exclusion of deeper underlying causes which must be present. While the fee schedule has been open to criticism, the profession has been accustomed by tradition and otherwise to give their services for small fees or none at all under justifiable conditions. An analysis of the complaints to the Association makes it plain that the recurrence or persistence of the situation, unwelcome both to the Board and to the profession, has been due principally to the conditions imposed by the Board upon the rendering of medical aid.

Before commenting upon the various sections of the Act which relate to medical aid we would repeat the necessity for a clear recognition of the place of the doctor in the compensation field. The employer and the employee are both beneficiaries. The medical practitioner is not. Because he is peculiarly qualified to do so, his services for the administration of medical aid are requisitioned by the Board to enable it to perform its functions. The doctor's services are given to the injured workman in the first instance as they would be given to any other patient. Once the question of compensation arises, however, he is hemmed in by conditions so restrictive in their effect as to make him no longer a free agent and entirely subject to the dictates of the Board.

#### **Commentary on Present Act**

You as members of the Committee are charged with the responsibility of examining the Act in the light of representations made to you by interested bodies. No useful purpose will be served by examining it in detail, but your attention is directed to the following sections.

Under Section 15 the attending physician must:

(a) Furnish from time to time such reports in respect of the workman's injury in such form as may be required by the regulations or by the Board;

(b) Give all reasonable and necessary information, advice or assistance to the injured workman and his dependents in making application for compensation; and

(c) Furnish in connection therewith such certificates and proofs as may be required; all without charge to the workman.

That is, in addition to the normal services of a physician there is added the making out of reports, certificates and proofs of injury and advising and assisting the injured workman.

Section 22 deals specifically with the furnishing of medical aid and authorizes the Board to adopt rules and regulations with respect to the furnishing of medical aid and for the payment therefor. The guiding principle is the decision of the Board as to what it deems reasonable and necessary.

Sub-section (3) of Section 22 deals with emergency cases. If the Board finds there was justifiable cause for the calling in of a physician and the charge for his services is reasonable it shall be paid by the Board.

Sub-section (4) of Section 22 provides that where in any case in the opinion of the Board the provision of a special surgical operation or other special medical treatment for a workman and the furnishing of it by the Board will be a means of avoiding heavy payment for a permanent disability, the cost thereof shall be payable as compensation. It is the Board that makes

the decision, not the doctor, and the Board must come to the conclusion not that the physical condition of the workman demands it but that the provision thereof will be a means of avoiding heavy payment for a permanent disability.

Sub-section (6) of Section 22 provides that the Board may in its discretion authorize employers to furnish or provide medical aid at the expense of the Board and upon terms fixed by it.

Sub-section (7) of Section 22 authorizes the Board to approve a plan of group medical aid subject to such conditions as the Board may require.

Sub-section (8) of Section 22 is perhaps the most important section in the Act insofar as medical aid is concerned. It states:

(a) That medical aid shall at all times be subject to the supervision and control of the Board;

(b) It empowers the Board to contract with doctors, nurses, etc., for any medical aid required and to agree on a scale of fees or remuneration therefor;

(c) The fees or charges for medical aid shall not be more than would be properly and reasonably charged to the workman if he himself were paying the bill; and

(d) No action for any amount larger than that fixed by the Board shall lie in respect of any such medical aid.

This suggests the physician's charges for services rendered to the Board be related to the economic status of the injured workman. If complied with literally, the fees chargeable would vary with the earning power of the workman and in each case the Board would have to examine the charges made in that light. Thus there could be no standard charge for similar treatment.

If the physician decides that additional treatment is required he must give it at his own risk. He knows that it is in the discretion of the Board as to whether or not it will be paid for by the Board, and if turned down he cannot look to the workman to pay it.

Again he feels that too often his account is scrutinized by a non-medical accounting staff without previous medical appraisal of his services. It has been suggested that this practice may lead to arbitrary dispositions of medical aid claims in such a way that it carries the implication of either dishonesty or incompetency on the part of the practitioner and creates friction.

Sub-section (9) of Section 22, subject to the control of the Board, authorizes the employment of a physician selected by the workman or his employer. Free choice of a doctor by the patient and the freedom of a doctor to accept or reject the case have always been a principle in the profession. When a physician accepts the responsibility of treatment he is expected to see it through. This implies that where necessary he may seek consultation and measures which will best hasten the patient's recovery. There have been instances where the Board has disturbed the doctor-patient relationship by removing the injured workman from the care of the physician of his choice and turning him over to another physician without the knowledge or concurrence of the attending physician.

Sub-section (14) of Section 22, which was added at the last session of the Legislature, empowers the Board to authorize the employment of osteopaths and chiropractors in cases where the injured workman desires it. The Legislature has given statutory

recognition to both the osteopaths and the chiropractors. A system of licensing has been set up and their respective fields of endeavor have been prescribed. The Committee's attention is directed, however, to the fact that the osteopath is allowed to do only minor surgery and the chiropractor is not permitted to engage in surgery of any type. There is no definition of what constitutes "minor surgery" and the Association suggests that the Board take cognizance of this fact and in its regulations delimit their respective fields.

Sections 27, 28, 29 and 30 deal with total and partial disability cases both whether such disability is either permanent or temporary.

Section 44 is also important. Under it the Board is given exclusive jurisdiction to examine into, hear and determine all matters and questions arising out of Part 1 of the Act and as to any matter or thing in respect of which any power, authority or discretion is conferred upon the Board. The action or decision of the Board is final and conclusive and is not open to question or review in any court. The Board is also given exclusive jurisdiction to determine amongst other things the existence and degree of the disability by reason of any injury, the permanence of disability by reason of any injury and the degree of diminution of earning capacity by reason thereof.

It can be assumed that the Legislature in enacting The Workmen's Compensation Act realized the extensive powers conferred upon the Board and the difficulties which would be encountered by the Board in making decisions if it did not have the benefit of expert advice.

Section 47 (1) authorizes the Board to act upon a report of any of its officers, and any enquiry or examination which it shall be deemed necessary to make may be made by one of the officers of the Board or by a commissioner, medical referee or some other person appointed to make the enquiry or examination. The Board may act upon his report as to the result of the enquiry or examination. The Board handles several thousand cases a year. In 1948 it passed upon over ten thousand cases in which compensation was allowed. The Association has no figures as to the number of cases which came before the Board in connection with which no compensation was paid. It can be readily seen that Section 47 (1) is absolutely adequate machinery presently in effect to properly and effectively serve the function of the Board. The Association suggests, however, that there is no adjudicate in contentious matters.

#### Conclusions

The Association submits that a careful study of the Act leads to the conclusion that:

1. The Board is an autonomous body entirely self-contained with complete control and supervision over the administration of medical aid and payment therefor; and

2. The medical practitioner is treated as a servant of the Board and not as an independent contractor; and

3. The Board must of necessity rely upon the medical practitioner for the basis of its findings and awards.

#### Fee Schedule

The Association submits that too much stress has been placed upon the adequacy or otherwise of the fee schedule. The policy of the Board in connection therewith has created friction between the Board and the medical practitioner which, in

turn, reacts against the best interests of the workman.

The Association feels that the present fee schedule does not reflect the economic conditions of the present. The first schedule was adopted before the First War and was premised upon the scale of fees charged by the profession at the time of its inception after taking into consideration the elimination of the bad debt feature and the certainty of payment through the Board.

The original schedule remained in force for many years without any substantial change. In 1934 or thereabouts, the then Board asked the doctors to take a further cut in fees to meet the onslaught of the depression. A reduction was agreed to and put into effect. For some time after war broke out efforts were made to have the fee schedule revised. These were successful to a degree when the present 1948 schedule was adopted. The Association was not satisfied that the changes made at that time were adequate and has been seeking a further revision. The Committee's attention is directed to a comparison of the wholesale price index for the year 1913 as compared with that of May, 1950. Taking 1926 as 100 the index of 1913 was 64. On the 1st of July, 1950, it was 166.9. The cost of living index has risen from 79.7 in 1914 to over 169 in 1950. The fee schedule has not even begun to keep pace with increased living costs.

The Association appreciates that this Committee will not deal with the schedule in any detail but felt that your attention should be directed to it so that you may more readily understand the position that the profession finds itself in at the present time.

1. As pointed out earlier in this presentation, the medical profession is not a recipient of benefits under the Act. However, its members possess the essential qualifications to deal with problems which arise from time to time and in connection with which they give advice and assistance to the Board. They will continue to do so but the Association bespeaks the co-operation of the Board in solving some of the difficulties with which the profession is faced. The Association submits that physicians' fees should be related to the service rendered and that a schedule of fees be treated as the minimum and not the maximum allowance.

2. In view of the fact that the Board only employs one qualified medical practitioner in the person of the Chief Medical Officer the practice of the Board in reducing medical accounts is unfair and unjustifiable. The only conclusion that the Association can come to is that the responsibility for the examination of doctors' accounts must be delegated to a staff member other than the Chief Medical Officer. The result is apparent in the payment of a reduced amount in any case when such account exceeds the schedule. It is true that there may be an appeal to the Board, but the individual accounts are comparatively small and do not justify the loss of time which would be occasioned thereby. The Association suggests that this situation can be met by an addition to the medical staff of the Board. The Association would have no objections to members' accounts being surveyed by a competent medical practitioner even though he is an employee of the Board.

3. The present system is embarrassing to the attending physician. He is familiar with the prescribed fee and the service which it represents. If he gives additional treatment there is no assurance that he will be paid for it by the Board and he

cannot collect from the injured workman. There may be a direct conflict between the dollar value of the service to be rendered and what is considered advisable by the physician.

4. The attending physician should not be placed in a position where he must elect as to the type of treatment to be given. The treatment required is one of the principle functions of the attending physician. If he feels that he is confined to the prescribed procedures he may find himself in the position of being criticized by the injured workman if recovery is not satisfactory, whereas had he followed his own opinion the result might have been entirely satisfactory.

#### The Association Recommends

1. The adoption of the Manitoba Medical Association fee schedule.

2. That the medically trained personnel of the Board be increased in order that disputes over methods of treatment, needs of workmen and the appraisal of physicians' accounts can be reduced to a minimum and thus avoid the possibilities of friction between the individual physician and the Board.

3. A closer liaison between the profession and the Board even to the extent of having a duly qualified medical practitioner as a member of the Board.

4. The desirability of setting up a representative committee to deal with cases in which medical evidence has a definite bearing on the establishment of the claim of the applicant and contentious matters arising therefrom.

5. An extension of the reporting time in cases of hernia.

6. Further study of the problem of rehabilitation of the injured workman both from remedial and from occupational standpoints.

7. A study of the operations of the Manitoba Medical Service which has filled a growing social need for group medical care. The committee is referred to the schedule of fees in effect as an indication of what are considered reasonable fees for physicians operating under the group plan.

Dated at Winnipeg this \_\_\_\_\_ day of November, A.D. 1950.

All of which is respectfully submitted.

Counsel for the Manitoba Medical Association.

#### Correspondence

##### Macfarland to Cousley, March 12th, 1951:

At the request of Dr. P. H. McNulty, Chairman of our Negotiating Committee, W.C.B., for your information, I am enclosing copy of Brief prepared for submission to the Workmen's Compensation Board—Department of Labour hearing.

##### McNulty to Cousley, March 28th, 1951:

In further to our conversation of today, I would ask that you have Dr. Fraser send me a list of items which are not at present in the Fee Schedule, but which are fairly common procedures, together with the assessed fee in each case. I would appreciate receiving this information at your earliest possible convenience, as there is a meeting of the medical committee early next week.

Thanking you for your kind co-operation I am,

##### Fraser to McNulty, March 30th, 1951:

In reply to your letter of March 28th, to Mr. Cousley, the following items have been added to the Fee Schedule on advice of Committees from

the Manitoba Medical Association:	
Nerve anastomosis	\$125.00
Tendon Graft,	
Thumb or index	125.00
Other fingers	100.00

This is where the sublimus is gone and the graft is to the profundus tendon.

Skin graft finger tip	\$ 20.00
Knutchner nail in femur	150.00
Unna's boot cast	5.00

Inter-group cons. not paid for.

Consultation not paid for where consultant takes over treatment.

##### Cousley to Macfarland, March 31st, 1951:

I wish to thank you for your letter of the 12th inst. enclosing copy of the brief submitted on behalf of your Association to a special committee appointed by the Minister of Labor to receive suggestions for amendments to The Workmen's Compensation Act.

One of the complaints of your Association (page 3) is that "the profession's relations with the Board have not been happier."

Our Board feels that it is most unfortunate that if your Association does desire happier relations that it should have submitted such a brief under the circumstances under which this was submitted.

Our reasons for this view are as follows:

(1) The Committee was set up to consider amendments to the Act.

Your brief is, chiefly, an attack on our Board for not allowing you higher fees, for cutting fees which are allowable, and for unwarranted interference with the handling of cases. None of these subjects, even if true, have anything to do with the Legislature or the Committee, and the only reason we can see for such being placed in your brief is to give the Minister the impression that your Association has taken up these matters with the Board, has either been ignored or turned down and then has been forced as a last resort to turn to the Legislature.

This of course is not true.

We negotiated with your Association a Schedule of Fees which became operative in 1948, and since that time there was not even a letter written to the Board asking for any new Schedule or for any negotiations for a new Schedule until Feb. 24th of this year when Dr. McNulty wrote me stating that he had been appointed Chairman of your negotiating committee and asked that an appointment be arranged.

(2) The other briefs were submitted on Nov. 1, 1950, and were read to the Committee by the individuals or associations who submitted them. The Chairman and the Secretary of our Board were present at that hearing and were in a position to correct any incorrect statements which were made in the various briefs.

Your brief was not submitted on Nov. 1st and we were not even paid the courtesy of having a copy sent to us until your letter of March 12th was received enclosing a copy for our perusal. This was the first time that we had even seen the brief. We were thus denied the right to defend ourselves before the Committee for the many charges in your brief, many of which are incorrect and which must be known to your Association to be incorrect.

(3) Some of these points are as follows:

(a) The statement is made that medical accounts are unfairly cut by non-medical staff.

The fact is that non-medical staff do make cuts in many of your accounts which are submitted but only in the cases where the accounts are not in accordance with the Schedule which is in force. Any fees which are reduced for any other reason are reduced by our Medical Officer.

On a spot check made by myself on March 30th in respect of all medical accounts which had been reduced, I find that out of a total of nine cases where cuts had been made, eight were made because the accounts were not in accordance with items 39, 40 or 41 of the Schedule. Only one required medical knowledge and that account was assessed by our Medical Officer.

(b) Your brief states that an appeal from such cuts in fees lies to the Board. This is absolutely inaccurate and, as you know, the appeal is to a Fee Assessment Committee of your own members, nominated and appointed by your own Association.

(c) Your brief suggests that there is no adequate machinery presently in effect to properly adjudicate in contentious matters (page 8).

We assume that this means "in medical questions."

All the members of your Association certainly should know by this time that for years our difficult medical problems, when there is a conflict between our Medical Officer and the workmen's doctor, are placed before an independent board of medical men appointed from the panel of doctors named by your Association. The Chairman and the Deputy Chairman of this Medical Board are elected to those positions by your Association.

(d) Your brief states (page 9) "The Association was not satisfied that the changes made at that time (referring to the 1948 Schedule) were adequate, and has been seeking a further revision."

Whether there has been dissatisfaction we do not know, but we suggest that if there was dissatisfaction this Board was the proper forum to approach on the matter.

We do know that the latter part of the sentence is quite untrue, as no further revision was even asked for until March of this year.

This is a long letter, and one which I would prefer not to write. I feel, however, that your brief called for an answer both to your Association and to the Minister of Labor. I am, therefore, sending a copy of this letter to Hon. Mr. Greenlay. We cannot help but feel that we also could prepare a lengthy brief setting out some of the difficulties and the disillusionments which we meet in dealing with some members of your Association.

Negotiations with Dr. McNulty, Chairman of your Negotiating Committee are proceeding at the present time in a mutual feeling of respect for the point of view of the other side. These negotiations with him will not be affected by our feeling that your brief was unfair and quite out of order.

#### Macfarland to Cousley, April 17th, 1951:

Receipt of your letter of March 31st, relative to the brief submitted on behalf of this Association, is acknowledged with thanks.

That a copy of the brief was not sent to you sooner is a regrettable oversight since it had been agreed that a copy be sent to you on the same date

as the original was submitted to the Minister of Labour, and I was under the impression that such had been done.

Since negotiations have been resumed, the points raised in your letter may safely be left in the hands of the committee, of which Dr. P. H. McNulty is chairman. May I assure you that it is the hope of the Association that some of the difficulties of the situation may be solved in a mutually satisfactory manner.

#### McNulty to Cousley, June 9th, 1951:

Further to our luncheon conversation, the Negotiating Committee of the M.M.A. has met, and prepared the following recommendations for your perusal:

1. Regulations that we would request be incorporated into your book of information.

##### 2. Fee Schedule.

You will notice that we have included the old fee schedule where possible, along with the proposed new fee schedule. We have given this great thought and many hours of work. You will note that the new fee schedule, as proposed, is very fair. We have taken into consideration the fact that the W.C.B. remits very quickly. I would ask you to examine this schedule and have it adopted for all accounts rendered on and after July 1, 1951.

Should any unclassified regulations or procedures require classification, I trust that you will allow us to negotiate with you at any time, and on the same level of understanding which you and I have carried on negotiations up to the present time.

Thanking you for your courtesy in these interviews, and assuring you that I am prepared at any time to discuss each procedure with you, I beg to remain.

#### Additional Regulations

June 9, 1951.

1. Re: Hernia. When the Board has approved claims for compensation in respect to hernia, a copy of the letter which is sent to the patient to be forwarded to the first attending doctor. (Same has already been instituted).

2. When consultation is requested by the Workmen's Compensation Board, it should be done through a letter to the attending doctor asking him to arrange for same. A copy of the consultation report should be forwarded to the original doctor.

3. Should the Workmen's Compensation Board institute a consultation with another doctor without consulting the original doctor, when received a copy of the report of this consultation must be forwarded to the original doctor.

4. When the Workmen's Compensation Board deems it advisable to transfer a patient from one doctor to another, notification of same to be sent to the original doctor designating the name of the doctor to whom the patient is being transferred.

5. When a patient suffers a second injury that is attributable to the original injury, for which he is still undergoing treatment, the second injury shall be compensative unless deemed otherwise by the Chief Medical Officer of the Workmen's Compensation Board, and the Fee Taxing Committee.

6. When regulations in respect to treatment or conduct of a case are instituted by the Workmen's Compensation Board, notification to be forwarded

to the Executive Secretary of the Manitoba Medical Association.

7. The reduction of accounts as rendered by a doctor, for any reason except that of not complying with the fee schedule, must be referred for consideration at a meeting of the Chief Medical Officer of the Workmen's Compensation Board, and the Fee Taxing Committee nominated by the M.M.A.

8. The doctor has the privilege to attend the meeting when his account is being adjudicated by the Chief Medical Officer of the Workmen's Compensation Board, and the Fee Taxing Committee nominated by the Manitoba Medical Association.

9. Delete No. 18.

Fee Schedule (reproduced, minus X-ray Schedule, in Man. Med. Rev. 32, 1:45-49, 1952 (January).

#### **Correspondence**

##### **McNulty to Cousley, June 11th, 1951:**

It was my intention to deliver the enclosed correspondence personally, but I find that you are absent from the city at present, and I am leaving tomorrow for Montreal to attend the meeting of the prepaid medical service plans.

I trust that you will find everything in order, and will have approved same prior to our next luncheon meeting later this month.

##### **Cousley to McNulty, June 20th, 1951:**

Your letter of the 11th inst. containing your letter of the 9th inst. with enclosures, reached this office during my absence from the city.

I have now had an opportunity to look over your proposals and I am surprised and disappointed to see the number and the amount of the suggested increases. At our first meeting you gave me the impression that only a few of the more common fees and procedures would be altered. I find, however, that out of a total of 243, all have been changed except possibly some 40 items. The changes, too, are most substantial varying from 25% to 100% increase.

Under these circumstances it is quite impossible that our Board should be able to deal with your proposals in a matter of days, particularly when your Committee spent some months in drafting it.

However, we will do our best to have our information gathered together as quickly as possible.

##### **McNulty to Fletcher, August 30th, 1951:**

On telephone inquiry to the office I learned that the Commissioner is on vacation. Would you advise me of the expected date of his return, and oblige.

##### **Fletcher replied to McNulty by telephone.**

##### **Cousley to McNulty, September 28th, 1951:**

I am sorry I was not able to get you after our Board Meeting, and I am leaving this evening to attend an international meeting of Workmen's Compensation Boards and will not be back until October 9th. I am anxious to have the question of your suggested new schedule come before the full Board and I am therefore suggesting that your Committee meet with the Board on October 18th, at 2.30 p.m., if you find this date is convenient. If not, will you kindly suggest a date that would suit your convenience.

##### **Cousley to Macfarland, October 17th, 1951:**

This will confirm our postponement of the meeting with your negotiating committee from 2.30 p.m. on Thursday, October 18th, to 2.30 p.m. on Thursday, October 25th.

##### **Cousley to Macfarland, November 9th, 1951:**

The Board has given careful consideration to the submissions made by your Committee on October 25th in reference to a new schedule of medical fees.

A considerable number of changes in the old schedule have been authorized and I would point out to you that the bulk of these changes increase the fees in the simple procedures where the benefits will affect all doctors who are doing Compensation work and will increase their bills very substantially. Had we left these procedures alone and increased the less common ones, the results would have been much less satisfactory from your standpoint.

It is possibly unnecessary to point out that any increase in medical fees is inflationary in that the employers pay for all Compensation costs and our assessments against them are a direct additional cost to their doing business. Such costs are reflected in the price of their products to the consumer. For this reason we do not feel that we can increase our medical costs beyond the cost of similar services in the other provinces as such increased cost would place our Manitoba employers in an adverse position with reference to their competitors in other provinces.

The policy adopted by our Board in making these changes has been to grant increases wherever it was possible to do so and still not exceed fees for similar work in the other provinces. The result of the changes will be that the Schedule as amended will in most items equal the highest in any province, and in all items will be substantially higher than the over-all average.

The changes authorized are as follows:

Fee Schedule (reproduced, minus X-ray Schedule, in Man. Med. Rev. 32, 1:45-49, 1952 (January).

Some of the complaints which have reached this office are in respect of the authority which the Board must exercise over the Profession in the handling of individual cases. Actually, this is a complaint against the Act itself as our Board does not attempt to do more than we are required to do under the Act.

In order to smooth out some of the situations where complaints are most apt to occur in respect of the exercising of this authority, the Board has agreed to adopt certain additional regulations which are substantially those submitted by your Committee. In most cases these regulations only set out what our present Practice has been. These new regulations will read as follows:

(1) When the Board has approved a hernia claim a copy of the letter sent to the workman will be sent to the first attending doctor;

(2) When the Board requests a consultation, it will, whenever possible, be done by contacting the attending doctor and asking him to arrange for the consultation. Copy of the consultant's report will be forwarded to the original doctor;

(3) When the Board institutes a consultation with another doctor without first consulting the

original doctor, copy of the consultant's report will be forwarded to the original doctor;

(4) When the Board deems it advisable to transfer an injured workman from one doctor to another, notification will be given to the original doctor designating the name of the new doctor who is taking over the case;

(5) When regulations are passed which will affect the Medical profession generally, notification of such regulations will be given to the Executive Secretary of the Manitoba Medical Association.

(6) On the written request of any doctor whose account has been reduced for any reason other than for not complying with the fee schedule, such account will be referred to the Fee Taxing Committee of the Manitoba Medical Association for its advice to the Board as to the amount to be allowed;

(7) The doctor, if he requests it, will have the opportunity to appear before the Fee Taxing Committee to make such representations as he may wish.

This will represent an entirely new departure in the handling of medical accounts. New, not only in Manitoba but in Canada, and we cannot see how any doctor can be disgruntled after this procedure has gone into operation.

We have no sympathy with the doctor who complains because his fee has been reduced when it is obvious that the reason for the reduction is that he has either not read or will not follow the Schedule which his own Association has ratified. We feel that there is a distinct obligation on your Committee to differentiate between this type of complaint and the one where the bill has been cut for other reasons. It is futile to come before the Board and in general terms say that everybody is complaining, unless you can give us details of the nature of the complaint and the person who made it so that the facts can be ascertained.

In respect of the complaint voiced by Dr. McNulty that one account had been reduced by 50c, I find that this has happened on many occasions but only because the doctor had ignored the Schedule and had charged 50c more for a visit or for some procedure than the Schedule provided for. This will continue to happen under the new Schedule as the Board has no intention of paving more than the Schedule rate simply because the doctor bills us for it either in ignorance or intentionally.

The items in your suggested x-ray schedule appear to be taken almost word for word from our x-ray schedule with the hospitals. We are prepared to agree to the same arrangements as to x-rays, with your Association as we have with the Hospital Association. A copy of this Schedule is attached. You will note that the fee is reduced by 25% when the x-ray is not reported on by a radiologist.

If this new set-up is acceptable to your Committee, we are prepared to put it into effect as soon as it is ratified by your Committee. The Board feels that the new schedule should be operative for three years at least. If for any reason you wish your Committee to meet with our Board again, we will be pleased to arrange for such a meeting.

It is our sincere hope that this new Schedule and additional regulations will usher in an era of better relations and better understanding between the members of your Association and our Board.

### Schedule of X-ray Fees

1. The fees listed hereunder contemplate the service of a radiologist. Where a radiologist is NOT employed, seventy-five per cent (75%) of the fees will be charged.

2. Hospitals employing or retaining radiologists will submit to the Board as soon as possible, a copy of the x-ray report signed by the radiologist.

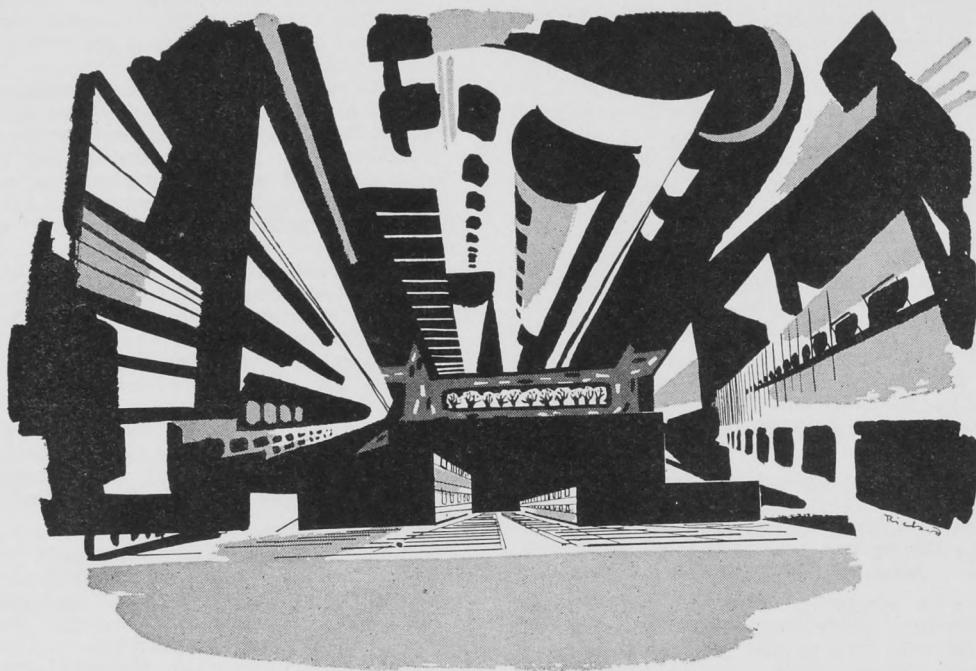
3. Hospitals NOT employing or retaining a radiologist will send x-ray plates to the Board as soon as possible for interpretation. All plates will be returned promptly with the report of the radiologist.

4. In fracture cases treated by extension or other methods requiring frequent x-rays, either to check the position or progress of healing, a fee of seventy-five per cent (75%) will apply.

5. In cases of multiple injury, full fee will be allowed for major and one-half fee for other x-rays.

6. Any adjustments negotiated between the hospital and Manitoba Hospital Service Association during the term of this agreement with respect to x-ray fees, shall be binding on the Board.

Type of Work	Fee
Skull:	
(a) Routine	\$12.50
(b) Sella Turcica	7.50
(c) Basilar studies, special	10.00
(d) Ventriculogram or Encephalogram	35.00
Eye:	
Localizing F.B. Preliminary	10.00
Localizing F.B. Sweet (additional)	15.00
Sinuses:	
Para-nasal: routine	10.00
Spec. Basilar or Lipiodal studies (additional)	10.00
Mastoids:	
Routine	12.50
Face:	
Small bones of and/or nose	10.00
Mandible:	
Routine	10.00
Temporo-Mandibular joint	10.00
Teeth:	
(a) Single area (each)	2.00
(b) Upper or lower complete (7f)	6.00
(c) Full series	10.00
(d) Additional films (each)	1.00
Shoulder:	
Single view	10.00
Complete (minimum of three views)	15.00
Upper Extremity:	
Humerus, elbow or forearm	10.00
Wrist complete	10.00
Wrist or hand—routine	7.50
Fingers	4.00
Pelvis	12.00
Lower Extremity:	
Hip	
(a) Routine	10.00
(b) Lateral (additional)	10.00
(c) Surgical (pinning, etc.)	25.00
Femur	10.00
Knee—routine	10.00
Special detailed (additional)	5.00
Arthrogram	25.00
Leg, ankle or foot	10.00
Toes only	4.00
Spine:	
(a) Routine—one area	15.00
(b) Routine—two areas	25.00



## nemesis of emesis

Gravol is synonymous with the successful prophylaxis and treatment of nausea and vomiting. Indicated in: motion sickness, pregnancy, radiation sickness, post-anesthesia, post-electric shock therapy, and with oral antibiotics.

Highly effective in Ménière's syndrome and migraine when instituted in the prodromal phase. Gives gratifying results in labyrinthine disturbances associated with hypertension and arteriosclerosis.

## the Gravols

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### THE PROVEN ANTI-NAUSEANTS



GRAVOL LIQUID



GRAVOL-DEX



GRAVOL-6



GRAVOL



GRAVOL SUPPOSITORIES

(c) Routine—entire spine .....	30.00
(d) Special studies (obliques, etc.) .....	15.00
(e) Myelogram .....	35.00
Ribs or sternum .....	10.00

**Chest:**

## Thoracic Viscera:

(a) Routine (minimum two views) .....	10.00
(b) Special studies, Lordotic, Oblique, etc. ....	10.00
(c) Fluoroscopic (additional) .....	5.00
(d) Bronchography (including lipiodol, etc.) .....	25.00
(e) Kymogram .....	25.00
(f) Tomogram, etc. ....	25.00

**Gastro-intestinal Tract:**

(a) Esophagus only .....	15.00
(b) Barium meal .....	20.00
(c) Special small bowel studies (additional) .....	10.00
(d) Colon, only .....	15.00
(e) Colon, double contrast (additional) .....	5.00
(f) Entire G.I. Tract, including Barium enema .....	30.00
(g) Cholecystogram (oral) .....	30.00
(h) Barium Meal and Cholecystogram .....	30.00
(i) Entire G.I. Tract and Cholecystogram .....	37.50
(j) Choleangiogram .....	20.00
(k) Miller Abbott tube .....	25.00
(l) Abdomen for free gas or obstruction .....	15.00

**Genito-Urinary Tract:**

(a) Without contrast media .....	10.00
(b) Pyelogram—retrograde .....	12.00
(c) Pyelogram—intravenous .....	20.00
(d) Cystogram or urethrogram .....	12.00
(e) Utero-salpingogram, including fluoroscopic control .....	20.00

**Macfarland to Cousley, November 14th, 1951:**

This will acknowledge receipt of your letter of November 9th in reference to submissions made by our Negotiating Committee.

When this material has been considered by the members of our committee we will communicate with you further.

**Macfarland to Cousley, November 30th, 1951:**

Further reference is made to your letter of November 9th with attached schedule of medical fees which has now been considered by the Negotiating Committee.

Regret was expressed that the concessions were restricted to a comparatively small number of procedures, and that the suggested increases were substantially reduced from those submitted by the Committee.

I was instructed to notify you that the proposed changes are not acceptable to the Committee, and to suggest that a further meeting be held with your Board some suitable evening prior to January 1st, 1952.

**Cousley to Macfarland, December 6th, 1951:**

I am in receipt of your letter of the 30th ult. and after consultation with our Board I find that it will be impossible to arrange an evening meeting but the Board will be glad to hear any further representations from your negotiating committee on Thursday, December 20th, at 2.30 p.m. If this date and time is not satisfactory to you please let me know.

**Macfarland to Cousley, December 13th, 1951:**

Upon receipt of your letter of December 6th, I contacted each member of the Negotiating Committee.

All agreed to adjust the appointments already made for the afternoon of Thursday, December 20th, to accept your invitation to meet the Board at 2.30 p.m.

Should any alteration become necessary, I shall contact you by letter or by phone.

**Cousley to Macfarland, January 3, 1951 (?1952):**

When your negotiating committee first contacted the Board in respect of a revision of the 1948 schedule, your Chairman stated that only a comparatively few items in the old schedule would be affected. It was suggested then that your Committee should prepare a revised schedule as a basis for our further consideration.

When this schedule was forwarded to the Board we found that out of a total of 210 items, 158 items were increased by from 25% to 100%.

Our Board then made certain investigations and comparisons and as a result we submitted to your Committee the schedule we would be prepared to accept. This revised schedule increased the common procedures and fees, such as home, office, and hospital visits from 16 2/3% to 50% and provided for substantial increases of from 20% to 40% in 33 of the other more infrequent procedures.

Our reason for increasing the more common procedures was that it would give a substantial increase to all doctors who were doing work for the Compensation Board. Our reason for not increasing the other fees has already been stated to you and is, simply stated, that our Board does not feel that it can increase the fees of the doctors in Manitoba to a point where they would be higher than the fees paid doctors in the other provinces in Canada.

At our recent meeting on December 20th, your Committee flatly stated that you would accept nothing less than the schedule proposed by you, although you made no effort to justify the new schedule other than the general statement that the cost of practising medicine had increased since 1948. The spokesman for your Committee stated that your new schedule was a "very fair schedule" and we then attempted to secure from the members of your Committee information as to other schedules so that we could compare them with a view to determining whether your proposed schedule was a fair schedule in relation to these under which you work with non-compensation patients.

The two schedules which you rather reluctantly referred to were the Manitoba Medical Service Schedule and the Manitoba Medical Association Schedule of Fees. A comparison between these schedules and the one which we have proposed shows that the fees in our schedule are in many cases higher than the fees which you receive under these other schedules. Your reply to this is that the Manitoba Medical Service Schedule "is a co-operative plan adopted by some public spirited doctors" and this schedule should not affect our negotiations. The Manitoba Medical Association schedule you say is out-dated.

A comparison of these schedules in respect of the commoner fees for doctors dealing with Compensation cases is as follows:

# *Accepted*

*by the A.M.A's Council on Pharmacy and Chemistry*

## **Cafergot, n.n.r.**

(E.C. 110)

### Oral Migraine Therapy

► **CAFERGOT** is the first highly effective oral preparation providing rapid and sure relief to the migraine sufferer.

Each tablet contains:

1 mg. ergotamine tartrate  
100 mg. caffeine (Free Base).

► . . . "Practically all of the patients in this series had previously used ergotamine tartrate to abort or relieve headache and they uniformly stated that E.C. 110 was more effective than ergotamine used alone" . . .

(Horton, Ryan & Reynolds, Proc. Staff Meet., Mayo Clin. 23: 105, 1948).

► . . . "Although E.C. 110 (CAFERGOT) was developed primarily for the relief of the migraine attack, it is uniformly effective and has a much wider range of usefulness in the relief of headache of all other types, especially typical and atypical histaminic cephalgia" . . .

(Hansel, Ann. Allergy, 6: 155 — 161, 1949).

► . . . "CAFERGOT . . . definitely seems to be an excellent preparation to use to abort headaches, especially those of the migraine and histaminic cephalgia types" . . .

(Ryan, Postgrad. Med., 5: 330, 1949).



*Literature and samples available on request.*

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MONTREAL, P.Q.

	Present W.C. Rate	W.C. Rate Offered by the Board	Rates Suggested by Man. Med. Assn.	*Present Man. Med. Serv. Rate	Present Man. Med. Assn. Rate
Office: 1st visit	\$3.00	\$3.50	\$4.00 plus 2.00 for report	\$3.00	
Sub. visits	1.50	2.00	2.00	2.00	
House: 1st visit	3.00	3.50	4.00 plus 2.00 for report	\$4.00	4.00
Sub. visits	3.00	3.50	4.00	3.00	3.00
Night visits	5.00	5.00	5.00	5.00	5.00
Sunday visits	5.00	5.00	5.00	5.00	5.00
Hospital visits: 1st visit	3.00	3.50	4.00 plus 2.00 for report	3.00	3.00
Sub. visits	1.00	1.50	2.00	2.00	2.00

\*These rates are not being paid in full.  
Doctors receive 60% to 80% of this rate.

Apart from the actual schedule fees, any fair-minded person must agree that the following points should be considered in comparing general schedules with the Workmen's Compensation Board schedule.

(1) The other schedules, although spoken of as minimal fees, are generally maximum fees, for in many cases the ordinary practitioner does not charge the schedule fee but for reasons too numerous to mention, he will charge less than the so-called minimal fee.

In compensation work the fee charged by the doctor is the actual schedule charge, always keeping in mind, too, that the fee is subject to revision upwards where it is shown that the circumstances are unusual.

(2) In many cases not under compensation, a fee is never even charged as the doctor knows that it would simply mean another entry in his book.

In compensation work, many of the most expensive cases from a medical viewpoint, are ones from which the doctor would be unable to collect any part of his fee. No matter how poor the workman is, if he is under Compensation the doctor receives the full amount of the schedule fee regardless of the fact that the fees may far exceed the man's own ability to pay if he were not on Compensation.

This is quite pertinent to the question of fees to be allowed as the Act contemplates that the fee to be charged should not exceed what the doctor could collect from his patient if he were not under Compensation. The Board feels that it is not correct for your Committee to say that you would have no bad debts if the workmen were not under Compensation. It is true that the regularly employed workmen would have no trouble in paying for the smaller injuries, but it should be pointed out to those members of your Committee who have very little experience in compensation matters, that we have hundreds of cases in a year where the medical fees would far exceed the man's ability to pay when you take into account his loss in wages, hospitalization, nurses' fees, etc. We have one case where a man was earning \$21.60 per week at the time of his injury, had doctors' bills amounting to \$1,200.00, hospital bills of \$2,500.00 and nurses' bills of \$7,300.00. We

have many cases where the doctors' bills in respect of an injury to an unskilled laboring man have been from \$700.00 up to as high as \$2,900.00. In all of these cases the Board pays the doctor in respect of his bills.

Apart from these schedules, our own investigations show that the schedule proposed by the Board is as high as any schedule of fees negotiated by the other Compensation Boards in Canada with the various medical associations. A comparison as to the same procedures set out above is as follows:

Manitoba										
Office Calls:	Old Fee	New Fee Agreed to by Board	P.E.I.	N.S.	N.B.	P.Q.	Ont.	Sask.	Alta.	B.C.
First	\$3.00	\$3.50	\$3.00	\$2.50	\$2.00	\$2-3	\$3.50	\$3.00	\$3.00	\$3.00
Subse- quent	1.50	2.00	2.00	1.75	2.00	1.50	2.50	2.00		2.00
House Calls:										
First	3.00	3.50	3.00	3.00	2.00	2-3	3.50	3.00	3.00	3.00
Subse- quent	3.00	3.50	3.00	2.50	2.00	2.50	3.50	3.00	2.00	3.00
Hospital Calls:										
First	3.00	3.50	1.00	1.00	1.00	2-3	3.50	3.00	3.00	3.00
Subse- quent	1.00	1.50	1.00	1.00	1.00	1.00	2.00	2.00	1.00	2.00
Night Calls	5.00	5.00	*2.00	*1.00			*1.00	*1.00	5.00	5.00
*Extra.										

On the question of a schedule for x-ray fees, your Committee asked that we adopt the x-ray schedule in force with the members of the Manitoba Hospital Association. The Board agreed to this request and so notified you on Nov. 9th, but at the last meeting the spokesman for your Committee stated that your members were not prepared to accept the same schedule that we have in force with the hospitals.

For these reasons and for the reasons already given to you, our Board cannot go further than to reiterate the offer made in our letter of Nov. 9th.

If for any reason your Committee wishes to make further representations, the Board will be in session on January 9th, 10th, 16th, 17th, 23rd and 24th at 2.30 in the afternoon, and will be glad to hear any such representations.

Yours sincerely,

(Signed) G. L. COUSLEY,  
Commissioner.

Macfarland to Cousley, January 31st, 1952:

Receipt of your letter dated January 3rd, 1951, is acknowledged, but it is presumed that the latter is a typographical error since the letter was received in 1952.

A reply has been delayed in order that the letter might be considered by the Negotiating Committee as a whole since its members who interviewed the Board are convinced that considerable misunderstanding and error has resulted from previous verbal communications.

No record of the conversations which you had with the Chairman of the Negotiating Committee, Dr. P. H. McNulty, is available, but it was not his idea that consideration of a new schedule be restricted to any number of items, rather that a revised schedule should be prepared by the Manitoba Medical Association Committee as a basis for

further consideration of the Board as outlined in your letter.

At no time during the meeting was it flatly stated that nothing less than the schedule proposed by the Negotiating Committee would be accepted. It was intimated that if the Board proposals represented the final offer, the Committee would have no alternative but to report back to the Association Executive.

When it appeared that stalemate might be reached, you asked if there were any items on the circumference which might first be considered. There was agreement that such should be done, and modification made where necessary. That was borne out by the fact that other fee schedules were brought into the discussion for comparison.

Any apparent reluctance to produce another schedule of fees was due to the fact that the Negotiating Committee was present to discuss fees for the Workmen's Compensation Board rather than those for other groups and it did not come prepared for such a discussion.

The Manitoba Medical Association Schedule of Minimum Fees was prepared in March, 1946, and has been under revision for several months, while the Tariff of the Manitoba Medical Service which became effective April 1st, 1949, has been altered on different occasions, and is also under revision at the present time.

Each Schedule has been accepted by the Manitoba Medical Association on behalf of the profession as a whole, and each allows for differing rates of remuneration to general practitioner and specialist.

The schedules allow for greater freedom on the part of the doctor who treats the patient, and either revised schedule, if accepted in its entirety by the Workmen's Compensation Board, would be acceptable to the Manitoba Medical Association. Such a proposal concerning the Manitoba Medical Association Schedule and the availability of Manitoba Medical Service has previously been made in a brief, of which you have a copy.

It is erroneous to remove from their context and quote fees unless recognition is made of the previously-mentioned facts. The initial office consultation under the Manitoba Medical Service tariff, which was omitted from your letter, would then read \$5.00 to \$10.00 with subsequent calls at \$2.00 to \$5.00, with corresponding adjustments for all items quoted, while those for the Manitoba Medical Association Schedule of Minimum Fees would be increased by 50% for specialist practitioners.

The present Workmen's Compensation Board fee for night calls is 10 p.m. to 8 a.m. The Committee requested that this be altered, 8 p.m. to

8 a.m., but no change was proposed by the Board. Those hours are included in the Manitoba Medical Service tariff, while the Manitoba Medical Association schedule fee for night calls is between 6 p.m. and 8 a.m.

The Manitoba Medical Service was sponsored, not by a few doctors, but by the profession as a whole. In 1951 the total cost of operating the scheme was borne by the profession, a very substantial reserve was built up to assure the public of service in an emergency, and the profession was paid at the rate of 75% on accounts.

For years the medical profession has accepted the responsibility of gratuitously looking after charity cases in the office, at the home, or in the public ward of the hospital, but the right to do so rests with the profession.

It is assumed that the Board collects from the employer a premium which has been determined actuarially, as sufficient to cover the costs involved by injury to the employee in every category of employment. Were the Workmen's Compensation Board to apply literally the provision of the Act with respect to medical fees, there should be a sliding scale of medical fees paid in each category which, with present full employment, might result in a considerable increase in fees for the profession, and greater inconvenience for the Board.

The Fees for Workmen's Compensation Board in other provinces is a matter for negotiation by the College of Physicians and Surgeons or the Medical Association concerned, and the apparent tendency of the profession in other provinces to accept low fees in times of elevated costs is quite incomprehensible.

At the interview on December 20th it was pointed out that as doctors are living in a community which charges them full fees for non-medical service, the profession should not be expected to make a unilateral sacrifice in an effort to curb inflation.

In connection with X-ray fees, the Committee considered the Schedule which had been agreed between the hospital and the Workmen's Compensation Board, but in the written submission deleted the proviso of the first clause, that 25% of the fee be deducted when the X-ray work was done by any doctor other than a certified radiologist. The Committee feels that recognition of the principle would involve the whole problem of the differential between practitioners with regard to all compensation fees.

Mr. Chairman, the Committee is still not prepared to accept your proposals of November 9th but is prepared to further discuss its own proposals. A further meeting may be arranged if you desire it.

## College of Physicians and Surgeons of Manitoba

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### Registration Committee

July 18, 1951

#### Enabling Certificates Granted

Tet Hyun Pang, M.B., B.S., National Sun Yat Sen U., Canton, 1948.

Si Chow (James) Tang, M.B., B.S., National Sun Yat Sen U., Canton, 1949.

Mieczyslaw Franciszek Emil Koziol, M.B., Ch.B., U. Warsaw, 1946; M.R.C.S., England, 1950; L.R.C.P., London, 1950.

James Edward Nelles, M.D., C.M., Queen's U., 1950; L.M.C.C., 1950.

Francis Karl Fleming, M.D., U. Ottawa, 1951; L.M.C.C., 1951.

Fischel Jerome Coodin, M.D., C.M., Queen's U., 1947; L.M.C.C., 1947.

Tadeusz Jerzy Halkiewicz, M.D., U. Lwow, 1938; L.M.C.C., 1951.

Betty Marjorie Lowe (Clifford), M.B., B.S., U. Sydney, N.S.W., 1944.

John Edmund Royds, M.B., Ch.B., St. Andrew's U., 1938; M.R.C.P., London, 1947.

George Alexander Barclay Cowan, M.B., Ch.B., U. Glasgow, 1944.

#### Certificate of Licence Granted

Louis Murray Mink, M.D., U. Toronto, 1950; L.M.C.C., 1950.

### Executive Committee

September 6th, 1951

A meeting of the Executive Committee of the College of Physicians and Surgeons of Manitoba was held in the Medical Arts Club Rooms at 8 o'clock p.m. (D.S.T.), on Thursday, September 6th, 1951.

Present: Dr. C. B. Stewart, Chairman; Dr. B. D. Best, Dr. Edward Johnson, Dr. J. S. Poole, Dr. C. H. A. Walton, Dr. F. K. Purdie (Vice-President), Dr. T. H. Williams (Treasurer), Dr. M. T. Macfarland (Registrar). Mr. David H. Jones of Dilts, Baker, Laidlaw and Shepard, acted for Mr. T. W. Laidlaw who was unable to be present.

Regrets were received from Dr. I. Pearlman who was unable to be present.

The minutes of Council Meeting held on May 23rd were distributed, but no action was taken.

### I. Business Arising from Council Committee Meeting, May 23rd, 1951

#### A. Disciplinary By-law

The Disciplinary By-law accepted by Council was specifically intended to cover offenses not serious enough to warrant erasure, but the final penalty of the By-law was erasure.

The matter was discussed with the solicitor whose written opinion on August 31st, 1951, was that Item 6 on Page 4 in the draft By-law (Erasure of name from membership in the College of

Physicians and Surgeons) be deleted. The power to erase a name from the Register is covered by the Medical Act.

**Motion:** "THAT Item 6 on Page 4 of the Disciplinary By-law (Erasure of name from membership in the College of Physicians and Surgeons) be deleted as advised by the solicitor." Carried.

#### B. Chiropodists

The Registrar reported that he had written a letter dated June 8th, to the Secretary, Association of Chiropodists-Manitoba, in reply to which he had received an invitation to meet and discuss the matters mentioned with the members of the Council of the Chiropodists' Association.

#### C. Auditors

Dr. Macfarland stated that the auditors had been notified. As the College year terminates on September 30th, and the annual meeting of Council will be held in early October, it is hoped that the audit may be completed during the first week of October.

#### D. Date of Annual Council Meeting

The suggested date was October 9th, the afternoon on which Princess Elizabeth and the Duke of Edinburgh would visit Winnipeg. It was the feeling of members that since October 9th will probably be proclaimed a public holiday in honour of the Royal Visit, the annual meeting should follow, rather than precede the Annual Meeting of the Manitoba Medical Association.

**Motion:** "THAT the Annual Meeting of Council be held in the Board Room, Medical College, at 10 o'clock a.m. (S.T.), on Saturday, October 13th, 1951." Carried.

#### E. Discontinuation of Internship

The Registrar reported that in accordance with the resolution of Council agreeing in principle with the proposals put forth by the Faculty Council Executive, University of Manitoba, that the obligatory undergraduate year be discontinued, and that appropriate action be undertaken, he had contacted the solicitor on August 17th but that no draft legislation had yet been prepared.

Notice of motion had also been presented at the May meeting of Council that the 1948 requirement of one year's internship prior to the issuance of an Enabling Certificate or licence be reconsidered at the annual meeting.

It was pointed out that the sections of the Medical Act which would require amendment would be 31, 32, 33, 33A, and possibly 75. It was agreed that in amendment to Section 33 no reference should be made to the Certificate of Credit under the Basic Sciences Act.

**Motion:** "THAT the solicitor be requested to prepare appropriate amendments in accordance with resolution of Council (May 23rd) and the discussion of this Executive, prior to the Annual

Meeting of Council in October." Carried.

#### F. Registrars' Meeting (Montreal)

**Motion:** "THAT the report of the Registrars' Meeting be deferred until Council Meeting in October." Carried.

#### G. Increased Fee for Enabling Certificate

At the May meeting there was agreement in principle with the increase of the fee for Enabling Certificates, for other than graduates of the University of Manitoba, to Twenty-five Dollars (\$25.00) of which Twenty Dollars (\$20.00) would be credited to subsequent registration fee. This matter was discussed with the solicitor on August 17th whose opinion was that while Council has power to establish the fee, Notice of Motion is advisable.

#### H. Specialist Register

In accordance with the resolution of Council the Registrar consulted the solicitor (T.W.L.) on August 17th and again (D.H.J.) on September 5th. Mr. David H. Jones was present at the meeting and presented a draft By-law for discussion by the Executive. It was agreed, by resolution, that the By-law should be re-drafted for presentation to the Council meeting in October with the following suggestions:

1. The list may include a person whose name, prior to January 1st, 1954, is on the list of specialists to be prepared by a committee appointed for that purpose by the Council of the College of Physicians and Surgeons of Manitoba.

2. The committee appointed to prepare a list of specialists shall consist of SIX MEMBERS, two representatives from the College of Physicians and Surgeons appointed by Council, OF WHOM ONE SHALL BE CHAIRMAN OF THE COMMITTEE, two from the Faculty of Medicine of the University of Manitoba, and two from the Manitoba Association. This Committee would continue to function until January 1st, 1954.

3. For applications received after January 1st, 1954, Council may exercise discretionary power.

The Registrar indicated that letters had been prepared for the Faculty of Medicine, University of Manitoba, and the Manitoba Medical Association requesting each body to nominate two members to the Committee. It was agreed that as names are selected by one organization, notification be passed along to prevent duplication.

**Motion:** "THAT Dr. M. T. Macfarland, Registrar, and Dr. C. H. A. Walton be the representatives from the College of Physicians and Surgeons on the Specialist Committee." Carried.

#### I (a) Electoral Districts

The resolution that the Medical Act be altered to give Council power to establish Medical Electoral Districts was discussed with the solicitor on August 17th but no draft legislation has yet been prepared.

**Motion:** "THAT the solicitor be requested to prepare appropriate amendment to the Medical Act which would authorize Council to establish Medical Electoral Districts and to alter the boundaries of such districts." Carried.

#### I. (b) Homeopathy

It was questioned whether, in amending the Medical Act, reference to licensed Homeopathic Practitioners in the Province (Sections 5d, 6, 11, 12, 13, 76, and 77 refer).

**Motion:** "THAT no amendment to the Medical Act concerning Homeopathic Practitioners be considered at this time." Carried.

The Registrar was requested to report any change in the number of Homeopathic Practitioners.

#### J. Liaison Committee

It was agreed at the May Council meeting that the sum payable monthly by the College of Physicians and Surgeons to the Manitoba Medical Association for rental, light, phone, etc., after September 1st, should be determined by this body following a meeting of the Liaison Committee. No meeting of the Committee has yet been convened.

#### 2. University of Manitoba (Re Basic Sciences)

The Registrar reported receipt of a letter dated June 28th, 1951, from the Registrar, University of Manitoba, enclosing a list of medical practitioners other than graduates of the University of Manitoba who have been granted the Certificate of Credit under the Basic Sciences Act. Information was requested of the names currently enrolled in the Register of the College of Physicians and Surgeons as practising doctors in this Province. A copy of the reply which had been prepared was read to the Executive Committee.

**Motion:** "THAT the Registrar comply with the request of the Registrar, University of Manitoba and send a copy to the Council representative or the University of Manitoba Senate." Carried.

#### 3. Letter from Miss Jean Allison

The Registrar presented a letter dated August 14th in which the recently appointed Assistant to the Registrar outlined her visit to the offices of the General Medical Council of Great Britain.

#### 4. Canadian Arthritis & Rheumatism Society

The Registrar reported that there had been some criticism by members of the profession of the manner in which the recent campaign for funds had been carried out. The matter will probably be discussed at a meeting of the Medical Advisory Committee to be held on Friday, September 7th.

#### 5. Communications

##### (a) American Medical Association

The Registrar presented a letter dated August 21st, 1951, from Frank V. Cargill, Director, Directory Department, who enclosed a revised proof of Manitoba names for the 1952 Directory requesting that alterations be made.

**(b) Canadian Red Cross**

On October 4th, 1950, a request was received from the Red Cross Blood Transfusion Service that specially trained nurses be allowed to do the bleeding. Council suggested that the bleeding should be done under medical supervision, and the Executive Committee later expressed the opinion that a doctor should be available at short notice, preferably on the premises in which the donations of blood are being made.

A verbal communication from the recently appointed Provincial Medical Director, Dr. G. E. Large, indicates that this Province is the only one in which such restrictions are imposed. The National Commissioner, Dr. W. S. Stanbury, hoped to arrange a meeting during his week-end visit, September 1st to 3rd. It was suggested that he communicate with the College in writing, and that Dr. Large might appear before Council if considered necessary.

**(c) Michigan State Board of Registration**

The Registrar presented a letter dated August 27th, 1951, from the Secretary, Michigan State Board of Registration, in which was enclosed the latest revisions of the Rules and Regulations of the Michigan State Board of Registration in Medicine. It was agreed that this matter be brought to the attention of Council.

**(d) Hospital for Mental Diseases—Selkirk**

The Registrar presented a letter dated June 29th, 1951, from the Medical Superintendent, Hospital for Mental Diseases, Selkirk, Manitoba, advising that Dr. \_\_\_\_\_ was admitted to Hospital on June 26th suffering from a mental illness. Dr. \_\_\_\_\_ admission to Hospital was on an Order of Commitment.

**Motion:** "THAT a statement of Dr. \_\_\_\_\_ competency to practise be secured for the Council meeting in October, and that a further statement of his competency to practise be secured upon discharge from hospital." Carried.

It was agreed that the solicitor be requested to advise concerning a By-law for automatic suspension from practice of a physician member who is admitted as a patient to a mental hospital.

**(e) Letter From Mr. Graham Spry**

The Registrar reported receipt of a letter from Mr. Graham Spry, Agent General in the United Kingdom and Europe for the Province of Saskatchewan, requesting regulations governing admission of doctors to practise in Manitoba and offering his services to interview prospective candidates for private and governmental practise. In his reply the Registrar acknowledged the offer of assistance and added, "Many applicants are under the impression that there is a shortage of doctors in Manitoba, and that hospital internships are abundant and remunerative. Both statements have, of course, been greatly exaggerated!"

**6. Unfinished Business****(a) Fees for Armed Forces**

The Registrar reported that while no word of a decision that the Department of National Defence would pay the registration fee for Medical Officers in the armed forces has been received, it is anticipated that the officer will be able to claim reimbursement for the annual fee necessarily paid to the College to maintain his standing.

**(b) Postgraduate Facilities for Commonwealth Physicians**

A communication dated March 29th from the Medical Council of Pakistan inquired if further word concerning postgraduate opportunities had been received from the Canadian Medical Association. In reply to a letter dated May 14th, addressed to the Association an answer dated May 18th indicates that the problem rests with the licensing bodies and medical schools.

On May 16th, 1951, a letter addressed to the Secretary, Manitoba Division of the Canadian Medical Association, was received from Mr. P. K. Banerjee, Acting High Commissioner for India in Canada, Ottawa, Ontario, requesting postgraduate training facilities for qualified doctors from India.

A letter dated June 19th, 1951, addressed to the Registrar was received from S. C. Sen, Honorary General Secretary, Indian Medical Association. S. C. Sen states that he has several candidates for postgraduate training in various subjects, and he inquires if there is any possible way of helping these young people to secure appointments in Winnipeg.

**7. Resignation of Doctor J. S. Poole**

Doctor Poole, a senior member on Council and representative to the Medical Council of Canada, intimated that he would attend and preside over the deliberation of the latter body, of which he is president, but that he would be unable to attend the Annual meeting of Council on October 13th. Doctor Poole indicated that he will be moving to Victoria, B.C. to reside, and expressed the wish that he be permitted to resign from Council.

**Motion:** "THAT this Executive recommend to Council that the resignation of Dr. J. S. Poole be accepted with regret, and that suitable entry of appreciation for many years of faithful service to the profession be inscribed in the minutes." Carried.

**Registration Committee  
September 19, 1951**

**Enabling Certificates Granted**

Kenneth Yu-Mien Hsu, B.Sc., St. John's U., Shanghai, 1939; M.D., St. John's U., Shanghai, 1942.

Gunther Semelka, M.D., U. Innsbruck, Austria, 1947.

Michel Stepan, M.D., U. Louvain, Belgium, 1939.

Teodor Muczij, M.D., Karl's U., Prague, 1928.

Markus Scherz, M.D., U. Brussels, 1941.

**Enabling Certificate Deferred**

Wasyl Zajcew, M.D., U. Berlin, 1943.

**Certificates of Registration Confirmed**

Harold Madill Barker, B.Sc., U. Man., 1942; M.D., U. Western Ontario, 1950; L.M.C.C., 1950.

Edward Huan Shu Chia, M.D., Cheeloo U., 1942; L.M.C.C., 1951.

Alwin Robert Parchment, B.A., Emmanuel Missionary College, Michigan, 1941; M.D., College of Medical Evangelists, 1950; L.M.C.C., 1951.

**Certificates of Registration Granted**

Glenn Elven Blackwelder, M.D., College of Medical Evangelists, 1947; L.M.C.C., 1948.

Reginald Champagne, M.D., U. Laval, 1950; L.M.C.C., 1951.

Elizabeth Cziller, M.D., Elizabeth Royal Hungarian

U., Budapest, 1926; L.M.C.C., 1951.

Henry Ernest Devlin, M.B., B.Ch., U. Dublin, 1944; Franz Kozin, M.D., Graz U., Austria, 1934; L.M.C.C., 1951.

Maurice Arthur Patrick McGrath, L., L.M., R.C.P., Irel., 1942; L., L.M., R.C.S., Irel., 1942.

Charles Herbert Read, M.D., C.M., McGill U., 1943; L.M.C.C., 1943.

**Certificate of Licence Confirmed**

Wilfred Napoleon Peter Albi, M.D., U. Ottawa, 1951; L.M.C.C., 1951.

George Watt Chapman, M.D., Stanford U., California, 1944; L.M.C.C., 1951.

**Certificate of Licence Granted**

George Eugene Large, M.D., C.M., Queen's U., 1939; L.M.C.C., 1939.

**Doctor for General Practice**

Group in Northwestern Ontario requires the services of a doctor to engage in General Practice. Position to be filled on a permanent basis as soon as possible. Salary \$5,700.00 per annum. Automobile, automobile expenses and professional expenses provided. Annual increases. Admission to Partnership. Direct inquiries, giving full particulars as to age, marital status, training, experience, references, etc., to Box 352, Manitoba Medical Review.

**General Surgeon Required**

General Surgeon with Fellowship required by large Group in Northwestern Ontario. Services to commence as soon as possible. Permanent. Salary \$11,000.00 per annum. Annual increases with ultimate admission to Partnership. Automobile provided, also automobile and professional expenses. Please give full particulars regarding age, marital status, training, qualifications, experience, references, availability, etc. Apply to Box 353 Manitoba Medical Review.

**Internist Required**

Internist with F.R.C.P. or equivalent required to expand the services of a large Group in Northwestern Ontario. To commence as soon as possible. Salary \$9,000.00 with annual increases. Automobile provided also automobile expenses and all professional expenses. Position permanent, with ultimate admission to Partnership. Please state age, marital status, training, qualifications, experience, and give references in first letter. Apply to Box 354, Manitoba Medical Review.

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## Social News

Reported by K. Borthwick-Leslie, M.D.

Dr. and Mrs. W. A. Shaver, with sons James and Bruce, have returned to their home in Minneapolis, having spent a few days visiting relatives and renewing friendships in town.

L. Rubin, M.D., announces the opening of his office at 406 Boyd Bldg., Winnipeg. Practice limited to Obstetrics and Gynaecology. The very best for the future, Doctor.

At Torquay, England, on Feb. 23, Patricia Ann, daughter of Mr. and Mrs. Bryant of Paignton Devon, England, was united in marriage with Dr. Eric C. H. Lehmann, formerly of Winnipeg. Dr. Eric is the son of the late Dr. J. E. Lehmann of Winnipeg and Mrs. Lehmann now residing in Montreal, Quebec. When he has completed his post graduate studies in England Dr. and Mrs. Eric Lehmann will reside in Vancouver, B.C.

Dr. and Mrs. M. R. MacCharles are reported to be somewhere in transit re the United Nations Tour. Mac is supposed to be in Burma, Mrs. Mac in Geneva, and eventually they meet in Ceylon and so on. Wonderful opportunity to see this world at first hand.

Dr. A. C. Abbott and Dr. Russell Cleave are having a wonderful time in Australia. All play, no work. Imagine spending two months fishing, shooting, chasing big game, small game, any kind of game. I wonder whether I'll enjoy the hula hula, probably on crutches, when Junior has finished his studies!

Mr. and Mrs. Wm. Patton (nee Dr. Donna Cruikshank) are happy to announce the birth of Andrew John, Feb. 25th.

In New York, Feb. 17th, Dr. and Mrs. R. L. Cooke report the birth of their second child, a son.

Dr. and Mrs. R. M. Chadwick (our Rodney) announce the birth of Pamela Joy in London, England. A sister for Saxon Lee.

Dr. and Mrs. D. E. Bergsagel (nee Joyce Sigurdson) announce the arrival of a daughter, Feb. 13th, in Salt Lake City, Utah.

Dr. and Mrs. Sterling Orr Dowling announce the birth of a daughter, Feb. 8th.

Dr. and Mrs. M. J. Lehmann, B.Sc., M.D., F.R.C.S. (C), are happy to announce the arrival of their second daughter, Ruth Claire, on Feb. 9th, at the Pavilion.

Dr. and Mrs. J. J. Asseltine, Fort Garry, are happy to announce the birth of Karey June, Feb. 21st.

It is with regret that we learn of the death in Vancouver of Dr. Percy Bell. News of his illness, arrived last week, but now his death. May we extend our sympathy, personally and on behalf of the profession, to his family and friends.

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Acetylsalicylic Acid .....	3 gr.
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**Department of Health and Public Welfare**  
**Comparisons Communicable Diseases — Manitoba (Whites and Indians)**

DISEASES	1951		1950	
	Jan. 1 to Jan. 26, '52	Dec. 2 to Dec. 29, '51	Jan. 1 to Jan. 27, '51	Dec. 3 to Dec. 30, '50
Anterior Poliomyelitis	0	2	0	0
Chickenpox	138	241	175	220
Diphtheria	1	1	1	1
Diarrhoea and Enteritis, under 1 yr.	1	10	2	7
Diphtheria Carriers	0	0	0	0
Dysentery—Amoebic	0	0	0	0
Dysentery—Bacillary	0	0	1	0
Erysipelas	3	2	1	2
Encephalitis	0	0	0	0
Influenza	5	8	4	11
Measles	146	100	322	319
Measles—German	0	2	3	1
Meningococcal Meningitis	0	1	0	0
Mumps	151	192	146	155
Ophthalmia Neonatorum	0	2	0	0
Puerperal Fever	0	0	0	0
Scarlet Fever	67	69	60	44
Septic Sore Throat	1	5	4	3
Smallpox	0	0	0	0
Tetanus	0	0	0	0
Trachoma	0	0	0	0
Tuberculosis	27	70	27	0
Typhoid Fever	0	2	0	0
Typhoid Paratyphoid	0	0	0	0
Typhoid Carriers	0	0	0	0
Undulant Fever	0	1	0	1
Whooping Cough	31	59	23	83
Gonorrhoea	93	98	114	99
Syphilis	8	11	12	12
Jaundice (Infectious)	2	0	0	0

Four-Week Period, January 1st to January 26th, 1952

DISEASE (White Cases Only)	*771,815 Manitoba	*861,000 Saskatchewan	*3,825,000 Ontario	*2,952,000 Minnesota
*Approximate population				
Anterior Poliomyelitis			3	18
Chickenpox	138	238	3349	—
Diarrhoea and Enteritis, under 1 yr.	1	—	1	—
Diphtheria	1	—	5	5
Diphtheria Carriers	—	1	—	—
Dysentery—Amoebic	—	—	—	1
Dysentery—Bacillary	—	—	4	5
Encephalitis Epidemica	—	—	2	—
Erysipelas	3	4	4	—
Influenza	5	—	19	1
Jaundice, Infectious	2	1	22	10
Measles	146	96	1626	116
German Measles	—	83	420	—
Malaria	—	—	—	—
Meningitis Meningococcal	—	3	9	7
Mumps	151	325	1908	—
Ophthal. Neonat.	—	—	—	—
Puerperal Fever	—	—	—	—
Scarlet Fever	67	168	229	84
Septic Sore Throat	1	16	3	10
Smallpox	—	—	—	—
Tetanus	—	—	—	—
Trachoma	—	—	—	—
Tularemia	—	—	—	5
Tuberculosis	27	23	102	9
Typhoid Fever	—	1	3	—
Typh. Para-Typhoid	—	—	—	1
Typhoid Carrier	—	—	—	—
Undulant Fever	—	—	3	—
Whooping Cough	31	65	114	8
Gonorrhoea	93	—	202	—
Syphilis	8	—	45	—

## \*DEATHS FROM REPORTABLE DISEASES

For the Month of January, 1952

**Urban**—Cancer, 51; Influenza (480-483), 2; Pneumonia, Lobar (490), 1; Pneumonia (other forms) (491-493), 8; Pneumonia of Newborn (763), 1; Poliomyelitis, 1; Tuberculosis, 5; Neoplasms of unspec. nature (230-9), 1; Benign Neoplasms (210-291), 1. Other deaths under 1 year, 32. Other deaths over 1 year, 228. Stillbirths, 11. Total, 271.

**Rural**—Cancer, 33; Influenza (480-483), 2; Measles, 1; Pneumonia, Lobar (490), 6; Pneumonia (other forms) (491-493), 4; Pneumonia of Newborn (763), 2; Tuberculosis, 4; Diarrhoea and Enteritis (571.0), 1; Diarrhoea of newborn (764), 1. Other deaths under 1 year, 15. Other deaths over 1 year, 173. Stillbirths, 12. Total, 200.

**Indians**—Influenza, 1; Pneumonia (other forms) (491-493), 6; Diarrhoea and Enteritis (571.0) (white on reservation), 1; 1 Indian; total of 2; Septicaemia and pyaemia, 1. Other deaths under 1 year, 2. Other deaths over 1 year, 1. Total, 3.

\*The above figures include 1951 registrations received in 1952, January 1st to February 12th, 1952.

This is the first report for 1952. **Chickenpox, Measles, Mumps and Scarlet Fever** are still quite prevalent.

**Diphtheria**—One case reported, diagnosis clinical only and not confirmed by laboratory.

**Jaundice (Infectious)** is now a reportable disease. Two cases were reported in the first four-week period.

**Poliomyelitis** seems to have changed its seasonal incidence to some extent. Both Ontario and Minnesota report January cases.

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#### Abbott Laboratories

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R. G. (Bud) Harman	5926
D. A. Tedford	7248

#### Allen & Hanburys Co.

H. W. Heaslip	3941
E. M. Tackaberry	4041

#### Ayerst, McKenna and Harrison

W. R. Card	4983
C. G. Savage	3453

#### British Drug Houses

F. J. Burke	3841
W. B. Pipes	9350

#### Ciba Company Ltd.

J. T. Dewar	4025
Fred Ruppel	4227

#### Connught Laboratories

Brathwaites Ltd.	9220
Frosst, Chas. E.	9245

#### Frosst, Chas. E.

W. M. Lougheed	4039
W. J. McGurran	2081
E. R. Mitchell	4021

#### General Electric Co. X-ray Dept.

W. A. Martin	9245
Horner, Frank W.	9245

#### Horner, Frank W.

Gordon Couch	4041
George D. Craine	2013

#### Mead Johnson

George Moore	4041
Merck & Co.	451

#### Merck & Co.

W. G. Ball	451
Ortho Pharmaceutical Corp.	451

#### Ortho Pharmaceutical Corp.

J. G. Johnston	926
Park, Davis & Co.	926

#### Park, Davis & Co.

L. W. Curry	401
B. S. Fleury	404

#### Sandoz Pharmaceuticals Ltd.

H. D. Robins	391
Schering Corp. Ltd.	391

#### Schering Corp. Ltd.

Halsey Park	404
Shuttleworth, E. B.	30

#### Shuttleworth, E. B.

S. M. Fairclough	30
Swift Canadian Company	30

#### Swift Canadian Company

H. A. Plant	209
Cam Loptson	40

#### Squibb & Son, E. R.

MacArthur, J. H. Don	40
E. E. Conway	6

#### Will, Chas R.

John R. Hope	401
Winthrop-Stearns	401

#### Winthrop-Stearns

Geo. Edmonds	401
R. M. Kelly	34

#### Wyeth & Bro., John

A. W. Cumming	33
W. J. Tarbet	42